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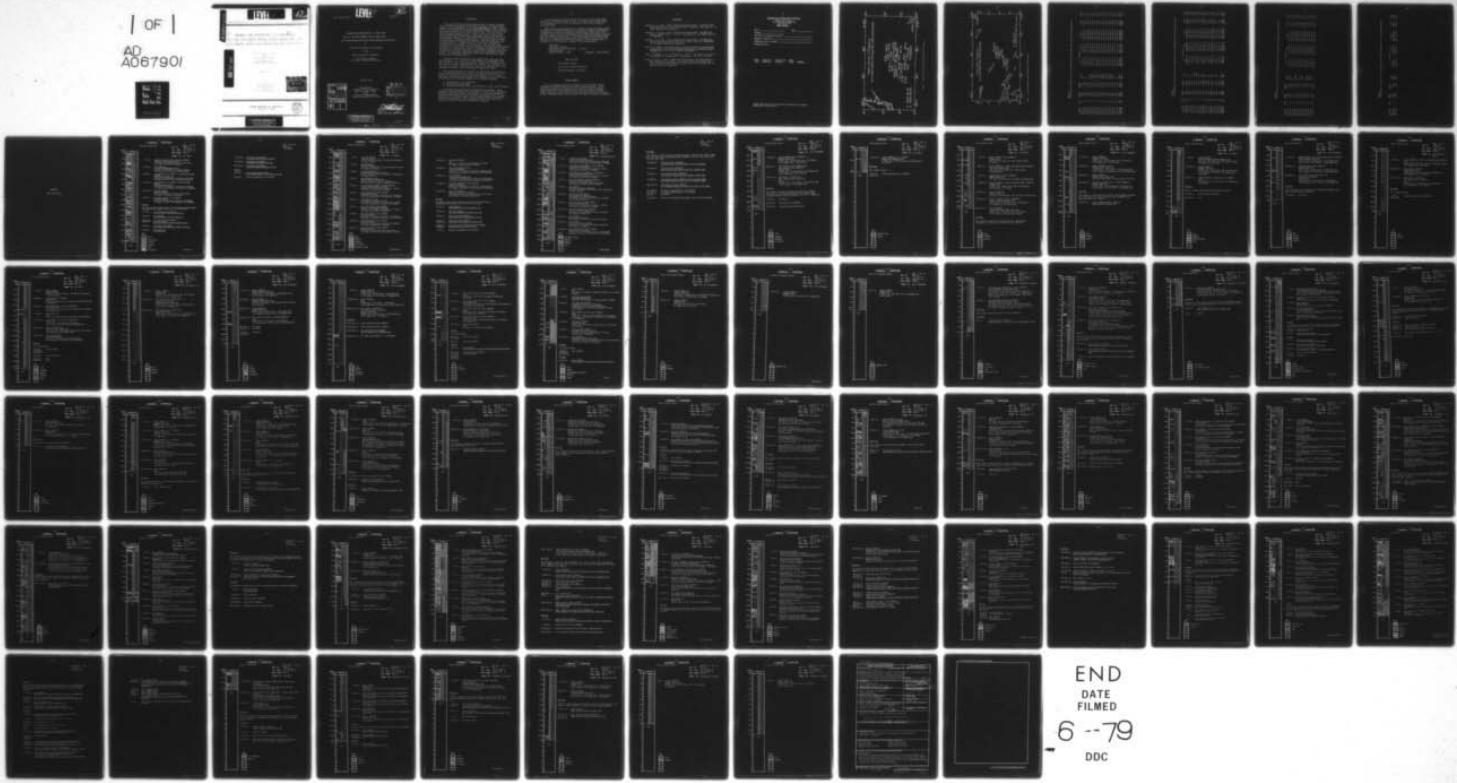
HAWAII INST OF GEOPHYSICS HONOLULU
SEDIMENT CORE DESCRIPTIONS: R/V KANA KEOKI 1975 AND 1976 NORTH --ETC(U)
FEB 79 F THEYER, C MATO

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SEDIMENT CORE DESCRIPTIONS: R/V KANA KEOKI
 1975 and 1976 NORTH CENTRAL PACIFIC CRUISES AND
 1976 SOUTH CENTRAL PACIFIC AND CLARION FRACTURE ZONE CRUISES

by

Staff of the Sediment Core Laboratory

of the

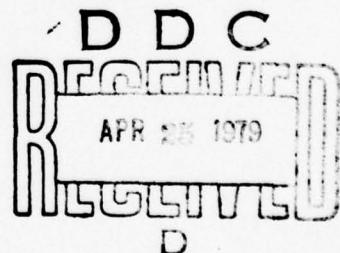
Hawaii Institute of Geophysics

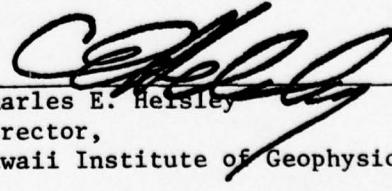
Fritz Theyer, Curator
 Chris Mato, Technical Supervisor

February 1979

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JUSTIFICATION	
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RESTRICTION/AVAILABILITY CODE	
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Prepared for
 National Science Foundation
 under Grant OCE77-20050
 and
 Office of Naval Research
 under Contract N00014-75-C-0209




 Charles E. Hersley
 Director,
 Hawaii Institute of Geophysics

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INTRODUCTION

This report presents generalized descriptions of deep-sea sediment cores collected by personnel of the Hawaii Institute of Geophysics (HIG) during the R/V Kana Keoki's cruises of 1975 and 1976 in the North Central Pacific, and the 1976 cruise in the South Central Pacific, and a 1976 IPOD-site survey conducted on the Clarion Fracture Zone. The locations of the cores are shown in Figures 1 and 2. Table 1 lists the cores, stations and corrected satellite-navigation coordinates, as well as water depth (corrected m), length of core, and (where possible) geological age of the oldest sediments recovered at each location. In general, ages are based on radiolarians and planktonic foraminifera; they are designated in the listing as follows: Q (=Quaternary), TP (=Pliocene), TM (=Miocene), TO (=Oligocene), TE (=Eocene), K (=Cretaceous). Where possible, the foraminiferal zones of Blow (1969) are indicated; uncertain age determinations are shown by a question mark. Table 1 is followed by descriptions of the structural and lithologic sequences, and sedimentary components encountered in each core (the latter determined by microscopic examination of smear slides). The sedimentary nomenclature used is that established by JOIDES for the Deep Sea Drilling Project.

Cores are labeled according to ship (cruise) name, year, gear type, and core number. For example, KK75 PC 11 indicates R/V Kana Keoki cruise 1975, Piston Core #11. The station number appears in the heading of the descriptions to further identify each core. Another gear type used is the free fall cores (FFC). PCOD refers to a piston core obtained with a core orienting device(COD), which is described by Seyb et al. (1977).

The standard procedures used during the preliminary core analyses at HIG are given by Andrews et al. (1970). The cores are initially cut into 150-cm-long sections on board the ship and stored at 2°-4° C. In the laboratory, the sections are then split into "working" and "archive" halves. The working half is routinely sampled in the following sequences:

- 1) Paleomagnetics (10-cm intervals)
- 2) Porosity (50-cm intervals)
- 3) Micropaleontological dating (top and bottom of core, 50-cm intervals)

The archive half is reserved for non-destructive analyses. Smear slides are routinely taken at 50-cm intervals. To allow a finer definition of specific lithologic contacts, smear slides are also taken immediately above and below boundaries as well as within the boundary layer. A visual description of the archive halves, which includes diagrams of sedimentary structures and boundaries, color variations (Munsell color code), and textural variations, completes the preliminary analyses.

79 04 20 005

Both the working and archive halves are stored in an airtight plastic sleeve and a protective plastic "D" tube. The archive half is maintained in cold storage at 2°-4° C; the working half is kept in dry storage at room temperature.

These initial descriptions serve as a guide to samples available through the Sediment Core Analysis Laboratory of the Hawaii Institute of Geophysics. A supplement to these are presented by Andrews *et al.* (1970, 1973, 1975) and Theyer *et al.* (1977) for the Solomon Islands 1968-1969 and Murray Fracture Zone 1967 cruises, Western Pacific 1970 cruise, Eastern and Western Pacific 1971 and 1972 cruises, North Central and Southeastern Pacific 1973 and 1974 cruises, and a Mid-Atlantic Ridge 1974 cruise. A sample request form is included (p. 4) in this report. Requests should be directed to:

Chris Mato
University of Hawaii
Hawaii Institute of Geophysics room 216
2525 Correa Road
Honolulu, Hawaii 96822 Telephone: (808) 948-6605

CORE LAB STAFF

Fritz Theyer, Curator

Chris Mato, Technical Supervisor

Patrick Lineberger, Technician

ACKNOWLEDGMENTS

The core laboratory analysis was supported by the National Science Foundation Grant OCE77-20050 and the Office of Naval Research. Coring retrieval operations were supported by the National Science Foundation Grants OCE76-02187 (South Central Pacific Ocean) and CU-Hawaii 25906A2 (IPOD site-surveys) and the Office of Naval Research (North Central Pacific Ocean). Additional support was provided by the Hawaii Institute of Geophysics.

REFERENCES

Andrews, J. E. et al. (1970) Sediment Core Descriptions: Solomon Islands 1968-1969, and Murray Fracture Zone, 1967. HIG-20-25, Data Report No. 16, Hawaii Institute of Geophysics.

Andrews, J. E. et al. (1973) Sediment Core Descriptions: R/V Mahi 1970 Cruise, Western Pacific. HIG-73-7. Data Report No. 24, Hawaii Institute of Geophysics.

Andrews, J. E. et al. (1975) Sediment Core Descriptions: R/V Kana Keoki 1972 Cruise, Eastern and Western Pacific Ocean. HIG-76-13, Data Report No. 32, Hawaii Institute of Geophysics.

Blow, W. H. (1969) Late Middle Eocene to Recent Planktonic Biostratigraphy. Proceedings of the First International Conference on Planktonic Micro-fossils, Vol. 1, E. J. Brill, Leiden, Netherlands.

Seyb, S., Hammond, S. R., and Gilliard, T. (1977) A new device for measuring the behavior of a piston corer. Deep-Sea Res., vol. 24, p. 943-949.

Theyer, F. et al. (1977) Sediment Core Descriptions: R/V Kana Keoki 1973 North Central Pacific Cruise, 1974 Southeastern Pacific Cruise, and a 1974 Mid-Atlantic Ridge IPOD Site Survey. HIG-77-9, Data Report No. 33, Hawaii Institute of Geophysics.

University of Hawaii at Manoa

Hawaii Institute of Geophysics
2525 Correa Road • Honolulu, Hawaii 96822
Cable Address: UNIHAW

SAMPLE REQUEST

NAME _____

DATE _____

ADDRESS _____

INSTITUTE OR COMPANY AFFILIATION _____

PURPOSE OF SAMPLING* _____

GEOGRAPHIC AREA OF INTEREST _____

PROPOSED ANALYSIS

CRUISE
NO.

CORE ID OR
DREDGE NO.

SAMPLE DEPTH
IN CORE

SAMPLE
SIZE

COMMENTS

*PLEASE SEND THE CORE LAB AN ABSTRACT OR PREPRINT OF THE RESULTS
OBTAINED FROM THESE SAMPLES

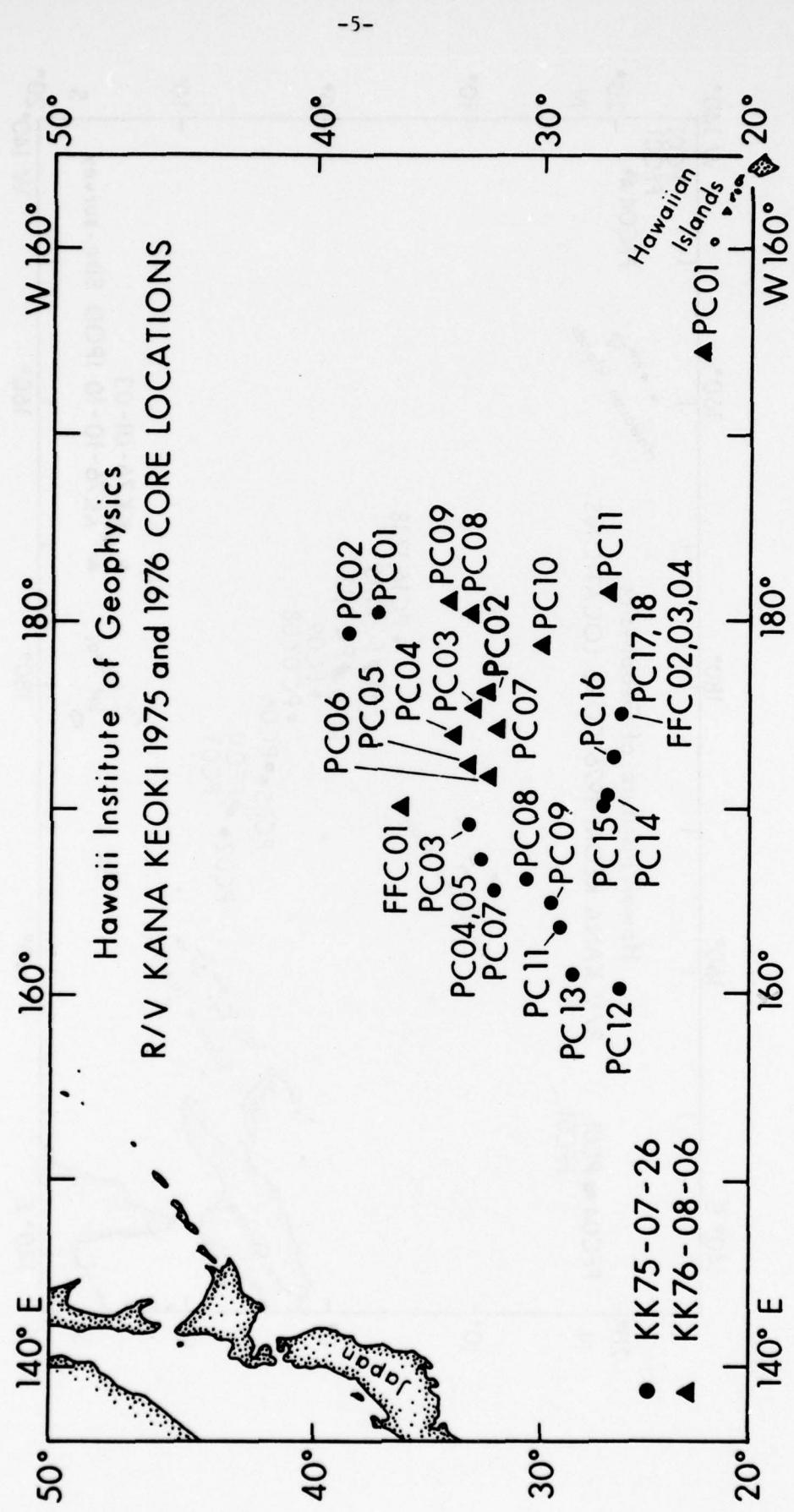


Fig. 1. Core locations, North Central Pacific Ocean.

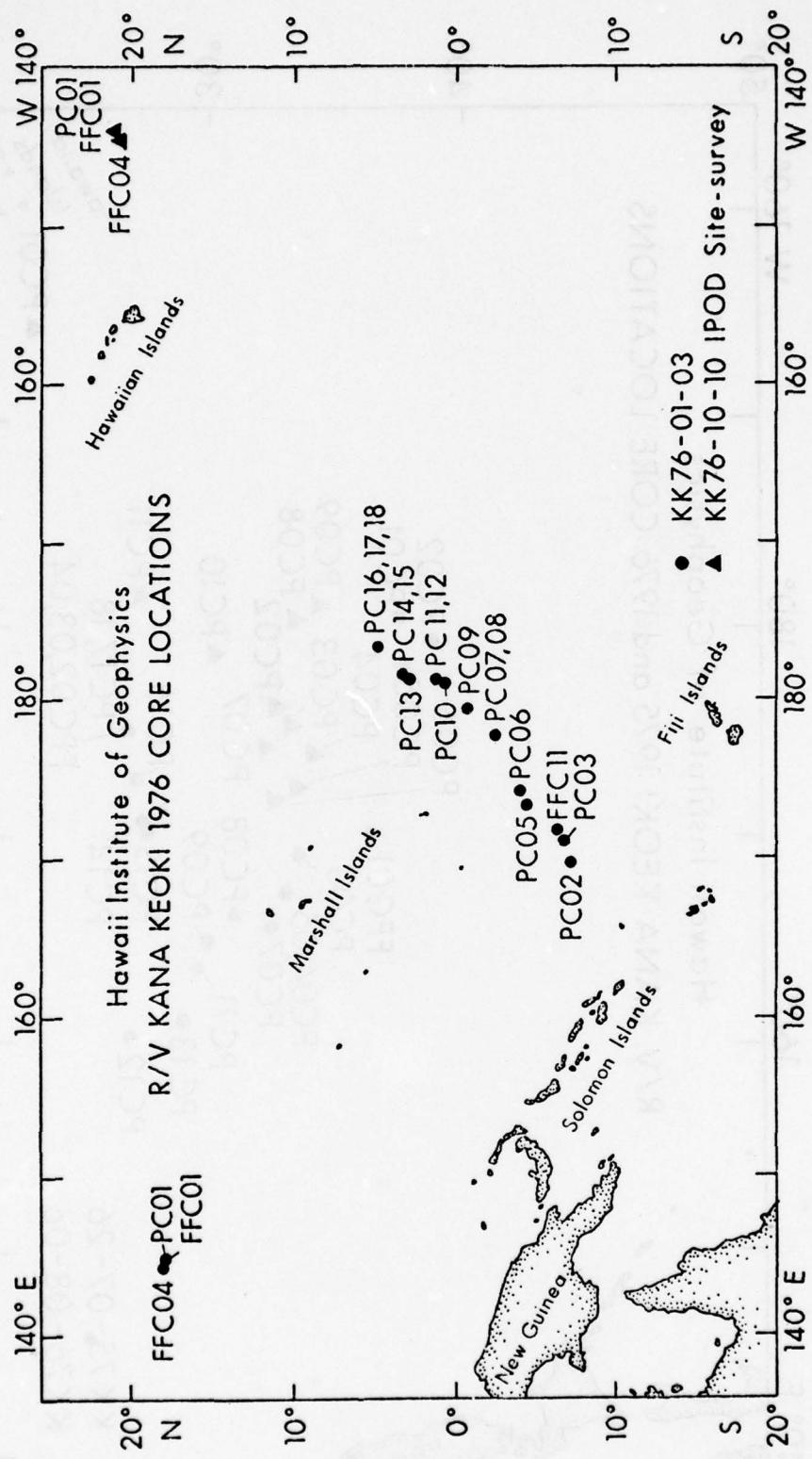


Fig. 2. Core locations, South Central Pacific Ocean.

TABLE 1
Chronological Listing of Cores Obtained During R/V KANA KEOKI 1975 Cruise (KK75-07-26)

CORE TYPE	STA #	DEPTH (M)	LENGTH (M)	AGE	LAT	LOCATION	LONG	DATE	TIME	PAGE
PCOD-001	1	5426	17.33	TP	37:22.4 N	179:36.1 W	1975 AUG. 5	16: 5	A-1	
PCOD-002	2	5497	17.09	Q	38:37.4 N	179:19.7 E	1975 AUG. 6	7:41	A-3	
PCOD-003	3	5736	16.98	Q	33:21.8 N	169: 5.4 E	1975 AUG.12	8:38	A-5	
PCOD-004	4	5946	11.57	UNDET	32:49.8 N	167:13.7 E	1975 AUG.13	4: 9	A-7	
PCOD-005	5	5911	02.15	UNDET	32:50.5 N	167:12.4 E	1975 AUG.13	9:44	A-8	
PCOD-007	7	6130	11.47	UNDET	32: 7.7 N	165:31.7 E	1975 AUG.14	11:16	A-9	
PCOD-008	8	6035	12.28	UNDET	30:36.9 N	166: 4.5 E	1975 AUG.15	8:44	A-10	
PCUD-009	9	5820	02.49	UNDET	29:28.3 N	164:52.1 E	1975 AUG.16	3:49	A-11	
PCUD-011	11	5940	09.88	UNDET	29: 4.4 N	163:33.0 E	1975 AUG.17	8:51	A-12	
PCUD-012	12	5959	11.92	UNDET	26:16.4 N	160:16.0 E	1975 AUG.19	4:55	A-13	
PCUD-013	13	5645	16.49	UNDET	28:33.3 N	161: 5.2 E	1975 AUG.19	23:52	A-14	
PCUD-014	14	5937	14.97	UNDET	26:56.8 N	170:37.3 E	1975 AUG.22	6:50	A-15	
PCUD-015	15	5881	11.96	UNDET	27: 3.4 N	170: 1.8 E	1975 AUG.22	13:36	A-16	
PCUD-016	16	5929	15.72	UNDET	26:37.5 N	172:45.3 E	1975 AUG.23	9:18	A-17	
PCUD-017	17	5905	11.27	K?	26:18.2 N	175: 2.6 E	1975 AUG.24	0:31	A-18	
PCUD-018	18	5909	11.66	K?	26:17.9 N	175: 5.7 E	1975 AUG.24	7:43	A-19	
FFC-002	19	5908	01.10	UNDET	26:17.8 N	175: 6.0 E	1975 AUG.24	10:14	A-20	
FFC-003	19	5908	01.12	Q	26:17.9 N	175: 6.0 E	1975 AUG.24	10:19	A-21	
FFC-004	19	5908	01.11	UNDET	26:17.9 N	175: 6.1 E	1975 AUG.24	10:24	A-22	

TABLE 2
Chronological Listing of Cores Obtained During R/V KANA KEOKI 1976 Cruise (KK76-01-03)

CORE TYPE	STA #	DEPTH (m)	LENGTH (m)	AGE	LOCATION	LONG	DATE	TIME	PAGE
FFC-003	12	3381	01.00	TP	17:48.8 N	144:56.5 E	1976 MAR. 3	12:44	A-23
PCOD-001	12	3326	03.91	Q	17:48.4 N	144:53.1 E	1976 MAR. 3	14:20	A-24
FFC-004	15	4363	00.95	Q	17:53.4 N	144:20.2 E	1976 MAR. 4	10:34	A-25
PCOD-002	3	4750	08.14	Q	7:39.1 S	169:43.1 E	1976 APR. 4	11:34	A-26
PCOD-003	4	5017	16.00	UNDET	7: 7.1 S	170:57.9 E	1976 APR. 5	0: 3	A-27
FFC-011	5	5291	01.22	UNDET	6:44.8 S	171:45.8 E	1976 APR. 5	9:59	A-28
PCOD-005	6	4716	11.09	MTM	4:43.9 S	173:25.7 E	1976 APR. 7	1:50	A-29
PCOD-006	7	5182	11.83	TE?	4:26.3 S	174: 5.8 E	1976 APR. 7	9:58	A-30
PCOD-007	8	5317	11.79	UTM	2:45.4 S	177:53.5 E	1976 APR. 8	12:58	A-31
PCOD-008	8	5314	10.67	UTM	2:45.1 S	177:51.5 E	1976 APR. 8	16:17	A-32
PCOD-009	10	5391	11.89	TP	1: 6.0 S	179:29.3 E	1976 APR. 9	7:31	A-33
PCOD-010	11	5387	11.09	TP	0:23.8 N	178:57.3 W	1976 APR. 9	22:22	A-34
PCOD-011	12	5219	11.71	MTM	0:56.1 N	178:40.5 W	1976 APR.10	5:41	A-35
PCOD-012	12	5203	06.21	TP	0:55.4 N	178:41.6 W	1976 APR.10	8:27	A-36
PCOD-013	13	5419	11.17	TP	2:40.1 N	178:45.1 W	1976 APR.10	22:42	A-37
PCOD-014	14	5290	11.32	MTM	2:54.7 N	178:30.8 W	1976 APR.11	4: 1	A-38
PCOD-015	15	5412	17.98	Q	2:56.4 N	178:32.1 W	1976 APR.11	7:40	A-39
PCOD-016	16	5197	17.06	ETM	4:33.7 N	176:33.1 W	1976 APR.12	9:43	A-40
PCOD-017	16	5240	17.04	MTM	4:34.4 N	176:35.3 W	1976 APR.12	13:23	A-41
PCOD-018	16	5151	17.18	UTM	4:35.0 N	176:37.1 W	1976 APR.12	16:23	

TABLE 3
Chronological Listing of Cores Obtained During R/V KANA KEOKI 1976 Cruise (KK76-08-06)

CORE TYPE #	STA #	DEPTH (M)	LENGTH (M)	AGE	LOCATION	LONG	DATE	TIME	PAGE
PCOD-001	1	4641	10.84	Q(N22)	22:22.3 N	165:30.9 W	1976 AUG. 9	3: 6	A-43
PCUD-002	6	5207	11.60	MTM	32:30.9 N	175:51.4 E	1976 AUG.18	7: 5	A-45
PCOD-003	9	4187	13.56	TP	33:15.6 N	175:18.0 E	1976 AUG.18	17:29	A-46
PCOD-004	10	3998	3.88	TP(N21)	33:55.5 N	173:59.3 E	1976 AUG.22	9:41	A-48
PCUD-005	11	5019	16.37	Q?	33:24.9 N	172:26.0 E	1976 AUG.23	4:55	A-49
PCOD-006	12	5302	13.33	MTM?	32:28.3 N	171:40.7 E	1976 AUG.25	1:48	A-51
PCOD-007	13	5404	4.23	UNDET	32:12.7 N	174:17.2 E	1976 AUG.25	23:59	A-53
PCUD-008	14	4826	5.70	K	33:20.9 N	179:32.3 W	1976 AUG.27	12:26	A-54
PCOD-009	15	4006	7.60	UNDET	34:22.9 N	178:58.1 W	1976 AUG.28	1:37	A-55
PCOD-010	16	4618	1.67	UNDET	30: 3.1 N	178:45.4 E	1976 AUG.30	6:57	A-58
PCOD-011	19	5190	13.25	UNDET	26:52.5 N	178:26.4 W	1976 SEP. 2	7:15	A-59
FFC-001	29	5074	01.08	Q	36:10.5 N	170: 2.0 E	1976 SEP.21	21:21	A-60

TABLE 4
Chronological Listing of Cores Obtained During R/V KANA KEOKI 1976 Cruise (KK76-10-10)

TYPE	CORE #	STA #	DEPTH (M)	LENGTH (M)	AGE	LOCATION	LONG	DATE	TIME	PAGE
FFC-001	1	5571	1	1.07	UNDET	20:19.3 N	144:36.9 W	1976	CCT.20	15:15
PCUD-001	1	5541	1	0.42	UNDET	20:19.5 N	144:37.9 W	1976	CCT.20	18:16
FFC-004	2	5576	2	1.18	UNDET	20:30.8 N	144:28.2 W	1976	UCT.22	10:48

A-61
A-62

APPENDIX

Core Descriptions

A-1
LITHOLOGIC DESCRIPTION

Northeast Hess Rise

KK75 Sta. 01

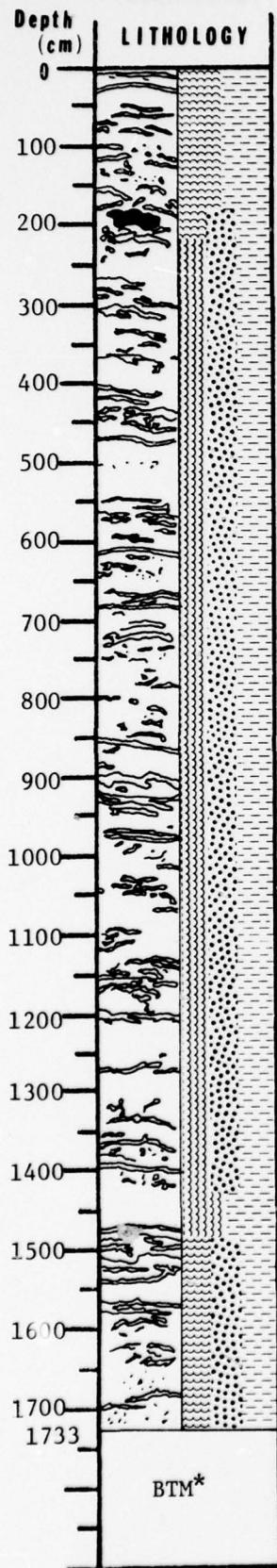
Core ID PCOD 01

37° 22.40' N

Lat., Long. 179° 36.14' W

Water Depth 5426 m

Logged By Au & Mato



yellowish brown (10YR5.5/4) to dark brown (10YR3/3)
MINERAL-RAD BEARING DIATOM RICH CLAY
56-72% clay, 14-25% diatom, 5-10% rad, 5-10% aniso min,
0-5% iso min, 0-1% ash, 0-1% silicoflag

brown (10YR5.5/3)
RAD BEARING DIATOM-MINERAL RICH CLAY
46% clay, 15-25% aniso min, 15-25% diatom, 7-10% rad,
2-3% quartz, 0-3% volcanic glass, 1-2% silicoflag

light yellowish brown (10YR6/4) to very dark grayish brown
(10YR3/2)
RAD-DIATOM RICH MINERAL CLAY
28-34% clay, 20-30% aniso min, 13-20% diatom, 15-17% rad,
5% sponge, 0-5% quartz, 0-3% silicoflag, 0-5% opaque min

light yellowish brown (10YR6/4) to dark grayish brown
(10YR4/2)
RAD-DIATOM-MINERAL RICH CLAY
25-52% clay, 13-25% aniso min, 12-25% diatom, 15-20% rad,
2-5% sponge, 0-8% silicoflag, tr-7% opaque min, tr-5% quartz

pale brown (10YR6/3)
RAD-DIATOM RICH CLAY
56-60% clay, 10-20% diatom, 15% rad, 7-10% aniso min,
2-7% sponge, 0-2% quartz, tr-1% opaque min

pale brown (10YR6/3) to brown (10YR5/3)
RAD-MINERAL RICH CLAY
34-43% clay, 20-25% aniso min, 15-20% rad, 7-12% diatom,
5-7% sponge, 2-4% quartz, 2-3% opaque min, 0-1% silicoflag

Mottling

Very slight to heavy mottling throughout core; very dark grayish brown through
light yellowish brown (10YR3/2, 3/3, 4/2, 4/3, 5/3, 5/4, 6/3, 6/4).

110-130 cm very dark grayish brown (10YR3/2)
QUARTZ-RAD BEARING MINERAL-DIATOM RICH CLAY

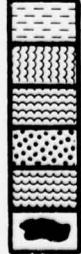
206-230 cm brown (10YR4/3)
QUARTZ-RAD BEARING DIATOM RICH MINERAL CLAY

702-717 cm very dark grayish brown (10YR3/2)
pale brown (10YR6/3)
SPONGE-QUARTZ BEARING DIATOM-RAD-MINERAL RICH CLAY

920-945 cm dark grayish brown (10YR4/2)
QUARTZ BEARING MINERAL RICH CLAY-BIOGENIC SILICA OOZE

1171-1180 cm black (10YR2.5/1)
CLAY MINERAL SAND

KEY



CLAY

RAD-DIATOM

DIATOM

MINERAL

RAD

Mn NODULE

*Pliocene

KK75 Sta. 01
PCOD 01
(continued)

1355-1368 cm dark grayish brown (10YR4/2)
CLAY BEARING MINERAL-RAD RICH DIATOM OOZE

1472-1500 cm dark grayish brown (10YR4/2)
CLAY-MINERAL RICH BIOGENIC SILICA OOZE

1507-1580 cm dark grayish brown (10YR4/2)
SPONGE-DIATOM BEARING RAD-MINERAL RICH CLAY

Layering

390-403 cm very dark grayish brown (10YR3/2)
MINERAL BEARING NANNO-CLAY RICH BIOGENIC SILICA OOZE

192-197 cm Mn nodule, approximately 2 cm in diameter

LITHOLOGIC DESCRIPTION

Northeast Hess Rise

KK75 Sta. 02

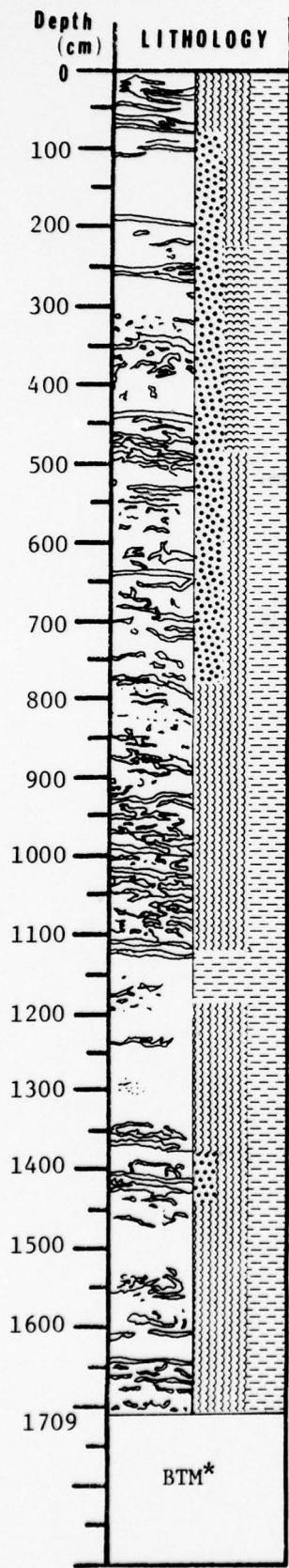
PCOD 02

38° 37.4' N

179° 19.7' E

Water Depth 6268 m

Logged By Au & Matto



KEY

CLAY

DIATOM

MINERAL

RAD-DIATOM

BIOGENIC SILICA

*Quaternary

KK75 Sta. 02
PCOD 02
(continued)

1130-1160 cm pale brown (10YR6/3)
CLAY
78% clay, 7% quartz, 7% rad, 5% aniso min, 5% rad,
2% sponge, 1% opaque min, 1% silicoflag

1160-1380 cm pale brown (10YR6/3, 6/3.5)
RAD-DIATOM RICH CLAY
51-61% clay, 15-17% diatom, 12-15% rad, 7-10% aniso min,
3% sponge, 2% silicoflag, 1-2% quartz, tr-2% opaque min

1380-1435 cm brown (10YR5/3)
DIATOM-RAD RICH MINERAL CLAY
33-36% clay, 20-25% aniso min, 15-20% rad, 12-15% diatom,
2-4% quartz, 2-4% silicoflag, 3% sponge, 3% opaque min

1435-1700 cm pale brown (10YR6/3) to brown (10YR5/3)
RAD-DIATOM RICH CLAY
55-59% clay, 12-20% diatom, 10-12% rad, 7-12% aniso min,
1-4% sponge, 1-3% quartz, tr-5% silicoflag, 1% opaque min

1700-1709 cm pale brown (10YR6/3)
MINERAL-RAD RICH CLAY DIATOM OOZE
30% diatom, 26% clay, 15% rad, 12% aniso min, 6% quartz,
6% silicoflag, 4% sponge, 1% opaque min

Mottling

Very slight to heavy mottling throughout core; very dark grayish brown through pale brown (10YR3/2, 3/3, 4/2, 5/2, 5/3, 6/2, 6/3).

250-254 cm brown (10YR5/3)
RAD BEARING CLAY RICH DIATOM MINERAL SAND

317-340 cm pale brown (10YR6/3)
RAD-QUARTZ BEARING DIATOM-MINERAL RICH CLAY

369-382 cm dark grayish brown (10YR4/2)
QUARTZ-RAD-DIATOM BEARING MINERAL RICH CLAY

452-467 cm dark grayish brown (10YR4/2)
765-775 cm QUARTZ-DIATOM-RAD BEARING CLAY MINERAL SAND

618-627 cm dark grayish brown (10YR4/2) and brown (10YR5/3)
958-980 cm MINERAL BEARING RAD-DIATOM RICH CLAY

0-4 cm Mn nodule approximately 2.5 cm diameter

LITHOLOGIC DESCRIPTION

South Emperor Basin

KK75 Sta. 03

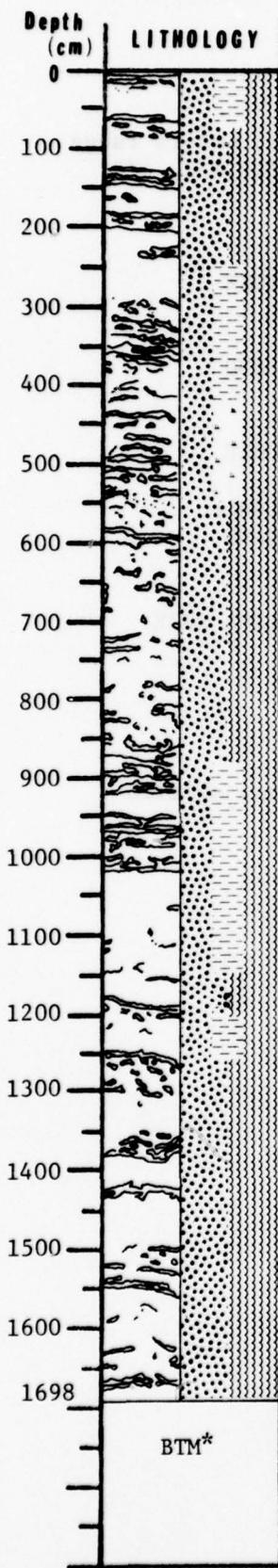
Core ID PCOD 03

33° 21.82' N

Lat., Long. 169° 05.39' E

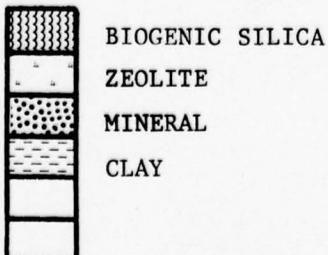
Water Depth 5736 m

Logged By Patterson & Mato



0-74 cm	yellowish brown (10YR5/4) CLAY-RAD RICH MINERAL DIATOM OOZE 32-48% diatom, 25-30% aniso min, 15-17% rad, 12-15% clay, 6% quartz, 2-3% opaque min, 2% volcanic glass, 1-2% sponge
74-255 cm	dark yellowish brown (10YR4/4) to brown (10YR4/3) RAD-MINERAL RICH DIATOM OOZE 41-53% diatom, 15-25% aniso min, 12-15% rad, 6-8% clay, 5-8% quartz, 2-4% opaque min, 1-2% sponge
255-322 cm	dark yellowish brown (10YR4/4) to brown (10YR4/3) RAD-CLAY-MINERAL RICH DIATOM OOZE 35-42% diatom, 22-25% aniso min, 14-17% clay, 12-15% rad, 2-10% quartz, 1-3% opaque min, 1% sponge
322-442 cm	pale brown (10YR6/3) to dark brown (10YR4/3) RAD-CLAY RICH MINERAL DIATOM OOZE 36-40% diatom, 30% aniso min, 12-14% clay, 12% rad, 3-7% quartz, 0-1% volcanic glass, 0-1% sponge
442-480 cm	brown (10YR5/3) RAD-MINERAL RICH ZEOLITIC DIATOM OOZE 35% diatom, 27% zeolite, 20% aniso min, 15% rad, 3% opaque min, 3% quartz, 1% sponge
480-555 cm	yellowish brown (10YR5/4) to dark yellowish brown (10YR4/4) CLAY-MINERAL RICH BIOGENIC SILICA OOZE 25% aniso min, 25% diatom, 25% rad, 15% clay, 10% sponge, 4% silicoflag, 2% opaque min
555-870 cm	pale brown (10YR6/3) to brown (10YR4/3) RAD RICH MINERAL DIATOM OOZE 30-40% diatom, 25-35% aniso min, 15-25% rad, 7-10% clay, 5-7% quartz, 1-3% opaque min, 0-2% sponge
870-1155 cm	pale brown (10YR6/3) to brown (10YR5/3) CLAY-RAD RICH DIATOM MINERAL SAND 25-40% aniso min, 20-30% diatom, 12-20% rad, 10-25% clay, tr-3% sponge, 0-3% opaque min
1155-1194 cm	brown (10YR5/3) RAD RICH DIATOM MINERAL SAND 35% aniso min, 35% diatom, 15% rad, 8% clay, 2% quartz
1194-1250 cm	brown (10YR5/3) CLAY-RAD RICH MINERAL DIATOM OOZE 30-35% diatom, 25-30% aniso min, 15-25% rad, 19-20% clay, 3-5% opaque min, 0-2% quartz
1250-1698 cm	pale brown (10YR6/3) to brown (10YR5/3) MINERAL BIOGENIC SILICA OOZE 25-40% aniso min, 25-35% diatom, 12-25% rad, 8-15% siliceous bioclastics, 5-10% clay, 0-7% opaque min, tr-3% silicoflag

KEY



*Quaternary

KK75 Sta. 03
PCOD 03
(continued)

Mottling

Very slight to heavy mottling scattered unevenly through core; colors range from very dark gray through pale brown (10YR3/1, 3/2, 3/3, 4/1, 4/2, 4/3, 4/4, 5/3, 5/4, 6/3).

178-198 cm yellowish brown (10YR5/4)
QUARTZ BEARING RAD-CLAY-MINERAL RICH DIATOM OOZE

431-439 cm very dark gray (10YR3/1)
QUARTZ-RAD BEARING DIATOM RICH CLAY MINERAL SAND

475-483 cm dark grayish brown (10YR4/2)
CLAY BEARING QUARTZ-RAD RICH MINERAL DIATOM OOZE

970-985 cm dark grayish brown (10YR4/2) mottle around nodule
RAD-QUARTZ BEARING DIATOM-CLAY RICH MINERAL SAND

1370-1397 cm dark grayish brown (10YR4/2)
CLAY BEARING MINERAL RICH QUARTZ BIOGENIC SILICA OOZE

157-160 cm Mn nodule approximately 3 cm diameter
974-180 cm Mn nodule approximately 6 cm diameter
1210 cm Mn nodule

442-459 cm top 17 cm of sediment discarded, broke off from section

LITHOLOGIC DESCRIPTION

South Emperor Basin

KK75 Sta. 04

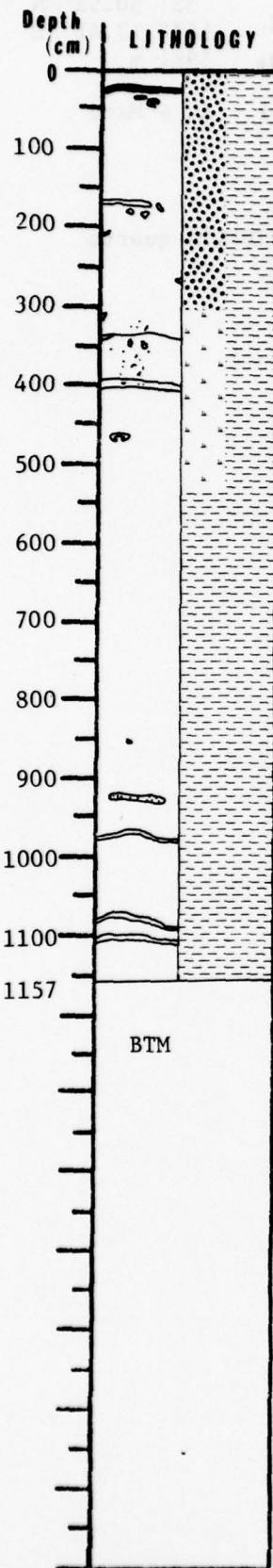
PCOD 04

32° 49.8' N

167° 13.7' E

Water Depth 5946 m

Logged By Au & Lineberger



KEY

CLAY
MINERAL
ZEOLITE
Mn NODULE

LITHOLOGIC DESCRIPTION

South Emperor Basin

KK75 Sta. 05

PCOD 05

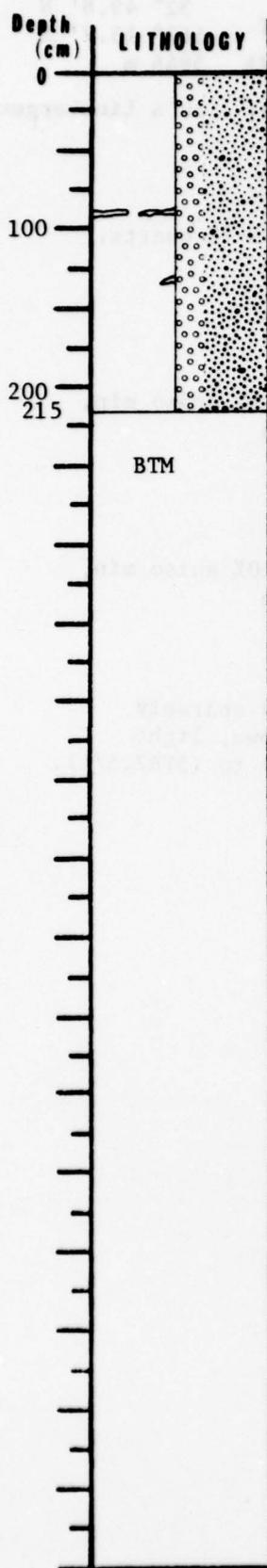
32° 50.52' N

167° 12.41' E

Water Depth

5911 m

Logged By Au & Mato



0-215 cm brown (10YR5/3) to (7.5YR5/4)
 QUARTZ RICH MINERAL CLAY
 55-58% clay, 25-30% aniso min, 10-12% quartz
 tr-7% rad

Mottling

Very slight mottles.

82-84 cm light yellowish brown (10YR6/4)
 140-142 cm

KEY



MINERAL CLAY

QUARTZ

LITHOLOGIC DESCRIPTION

South Emperor Basin

KK75 Sta. 07

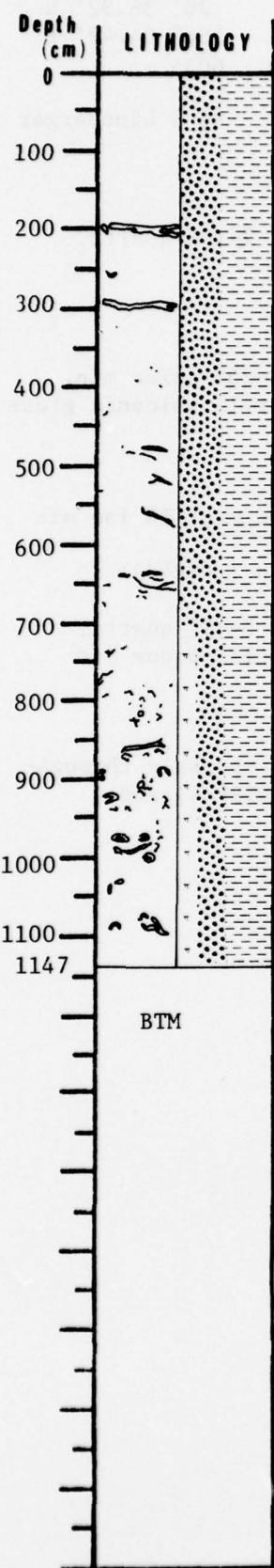
Core ID PCOD 07

32° 07.72' N

Lat., Long. 165° 31.68' E

Water Depth 6130 m

Logged By Au & Mato



0-20 cm	dark yellowish brown (10YR4/4) MINERAL CLAY 59% clay, 30% aniso min, 10% volcanic glass, 1% quartz
20-44 cm	brown (10YR4/3) to dark yellowish brown (10YR4/4) CLAY RICH MINERAL SAND 70% aniso min, 19-21% clay, 2-10% quartz, 1-7% opaque min
44-95 cm	dark yellowish brown (10YR4/4) MINERAL RICH CLAY 77% clay, 20% aniso min, 2% quartz, 1% opaque min
95-660 cm	brown (10YR4/3) to dark yellowish brown (10YR4/4) MINERAL CLAY 43-69% clay, 28-50% aniso min, tr-10% quartz, 0-4% iso min, tr-1% nanno
660-700 cm	brown (7.5YR4/3) MINERAL RICH CLAY 54% clay, 20% aniso min, 12% iso min, 3% opaque min
700-1015 cm	brown (7.5YR4/3, 4/2) to (10YR4/3) ZEOLITE BEARING MINERAL CLAY 30-56% clay, 25-40% aniso min, 5-9% zeolite, 3-5% opaque min, 0-10% iso min
1015-1147 cm	brown (10YR4/3) ZEOLITE BEARING MINERAL RICH CLAY 60-68% clay, 20% aniso min, 6-8% zeolite, 4-9% iso min, 2-3% calcareous frags

Mottling

Very slight to moderate mottling scattered very sparsely throughout the core; light yellowish brown (10YR6/4).

KEY



CLAY

MINERAL

ZEOLITE

LITHOLOGIC DESCRIPTION

South Emperor Basin

KK75 Sta. 08

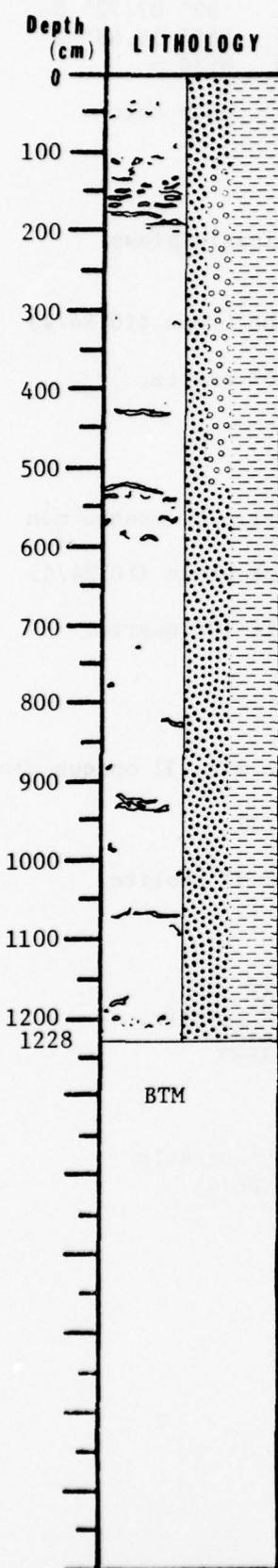
PCOD 08

30° 36.92' N

166° 04.47' E

Water Depth 6035 m

Logged By Au & Lineberger



0-140 cm	brown (10YR4/3) MINERAL RICH CLAY 64-65% clay, 20-25% aniso min, 7-10% quartz, 1-2% opaque min, tr-1% iso min
140-450 cm	brown (10YR4/3 to 5/3) MINERAL-QUARTZ RICH CLAY 57-69% clay, 12-20% quartz, 10-25% aniso min, 1-2% iso min, 1% opaque min, tr-1% volcanic glass
450-525 cm	brown (10YR4/3) MINERAL RICH QUARTZ CLAY 52% clay, 30% quartz, 15% aniso min, 1% iso min
525-1228 cm	dark brown (10YR3.5/3) to brown (10YR4/3) MINERAL RICH CLAY 61-78% clay, 10-25% aniso min, 5-11% quartz, 0-3% zeolite, 1-2% iso min, tr-1% opaque min
<u>Mottling</u>	
900	Very slight to slight mottling scattered very sparsely throughout core; colors are light yellowish brown (10YR6/4) and brown (10YR4/3) to (7.5YR5/4).
915-925 cm	light yellowish brown (10YR6/4) QUARTZ BEARING MINERAL CLAY

KEY



CLAY
MINERAL
QUARTZ

LITHOLOGIC DESCRIPTION

South Emperor Basin

KK75 Sta. 09

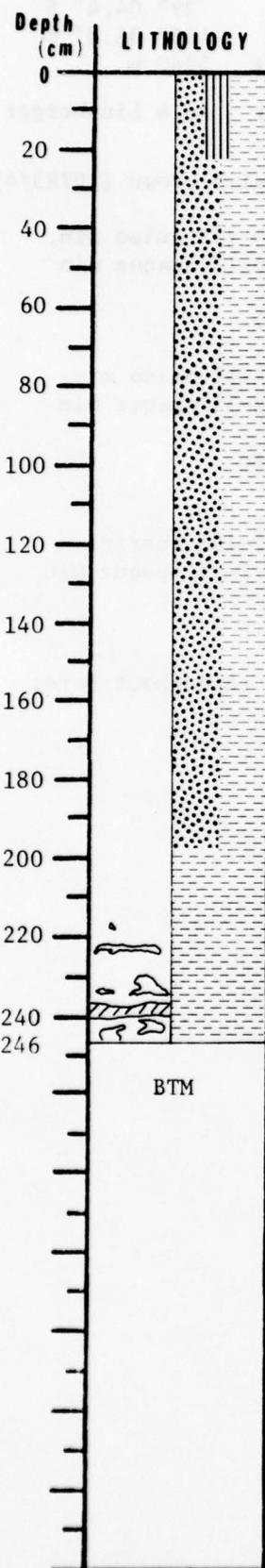
Core ID PCOD 09

29° 28.32' N

Lat., Long. 164° 52.14' E

Water Depth 5820 m

Logged By Au & Mato



0-25 cm brown (10YR4/3)
VOLCANIC GLASS BEARING MINERAL CLAY
44% clay, 40% aniso min, 10% volcanic glass,
4% quartz, 2% opaque min

25-155 cm brown (10YR4/3)
MINERAL RICH CLAY
65-84% clay, 11-20% aniso min, 0-5% iso min,
0-5% zeolite, 2% quartz, 1-3% opaque min,
0-2% nanno

155-246 cm brown (10YR4/3) to dark brown (7.5YR3/2)
CLAY
88-90% clay, 0-7% aniso min, 3-5% opaque min,
2-5% nannos

Mottling
Slight to heavy mottling in bottom portion of core.

218-246 cm pink (7.5YR7/5) mottles

237-240 cm void

KEY



CLAY
MINERAL
VOLCANIC GLASS
VOID

LITHOLOGIC DESCRIPTION

South Emperor Basin

KK75 Sta. 11

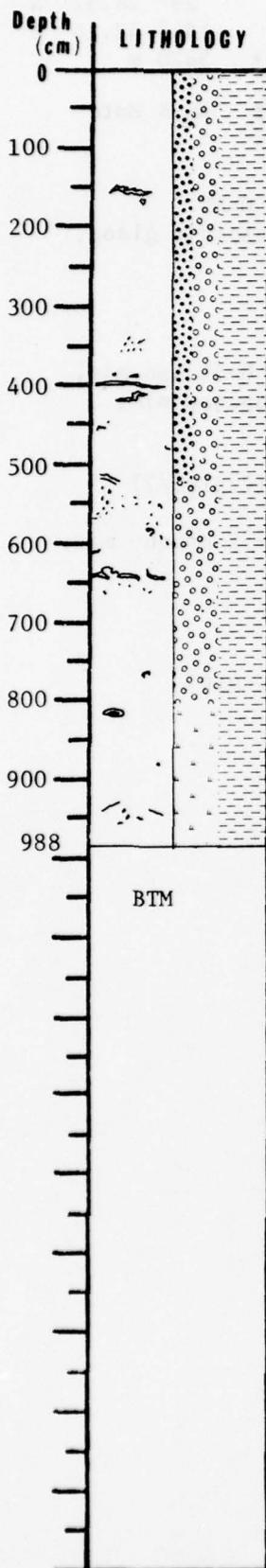
PCOD 11

29° 04.4' N

163° 33.0' E.

Water Depth 5940 m

Logged By Au & Lineberger

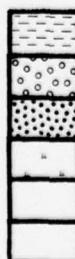


0-525 cm	brown (10YR4/3) to dark yellowish brown (10YR3/4) MINERAL-QUARTZ RICH CLAY 62-73% clay, 10-20% quartz, 10-12% aniso min, 1-5% iso min, 0-4% zeolite, tr-1% opaque min
525-805 cm	dark yellowish brown (10YR3/4) QUARTZ RICH CLAY 60-77% clay, 10-20% quartz, 5-15% aniso min, 1-7% zeolite, 1-3% iso min, tr-3% opaque min
805-988 cm	very dark brown (7.5YR2.5/2) to dark brown (7.5YR3/2) ZEOLITE CLAY 48-64% clay, 30-35% zeolite, 2-10% quartz, 4-8% aniso min, 1-3% iso min, 1-3% opaque min
887-888 cm	Mn nodule

Mottling

Very slight mottling scattered very sparsely throughout core;
light yellowish brown (10YR6/4).

KEY



CLAY
QUARTZ
MINERAL
ZEOLITE

LITHOLOGIC DESCRIPTION

South Emperor Basin

KK75 Sta. 12

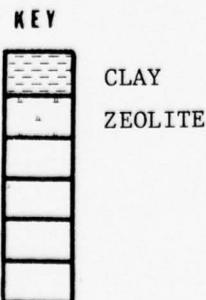
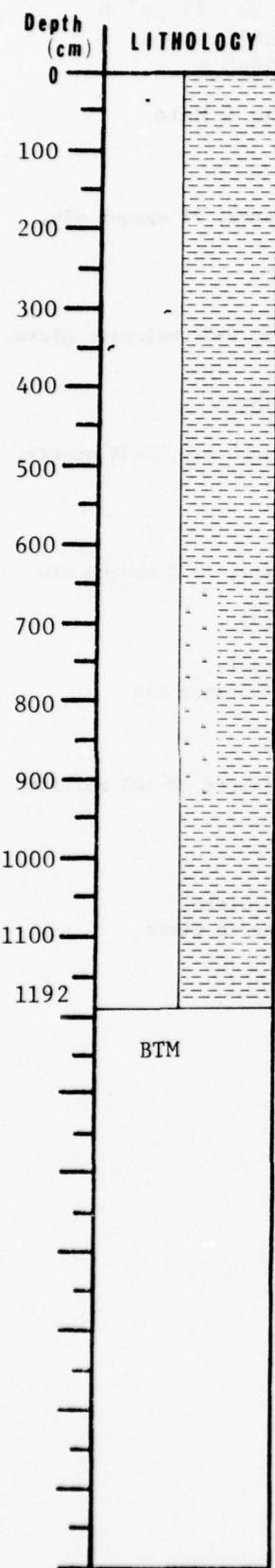
PCOD 12

26° 16.40' N

160° 16.01' E

Water Depth 5959 m

Logged By Au, Patterson & Mato



LITHOLOGIC DESCRIPTION

South Emperor Basin

KK75 Sta. 13

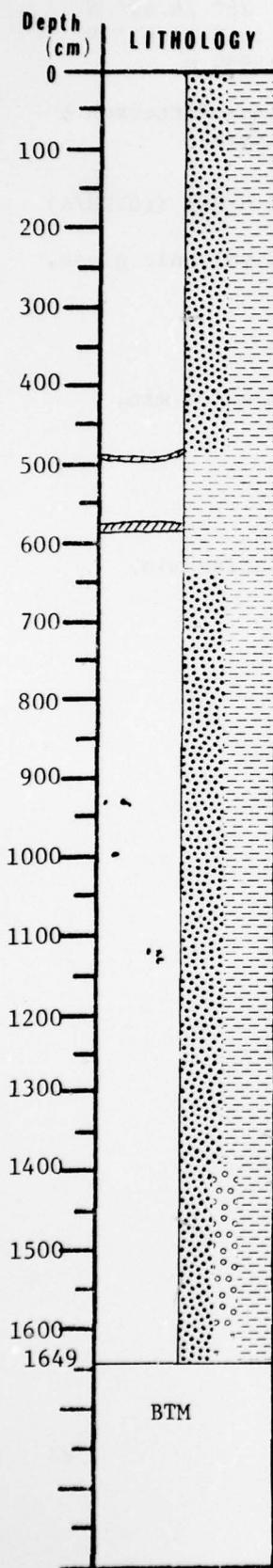
Core ID PCOD 13

28° 33.26' N

Lat., Long. 161° 05.24' E

Water Depth 5645 m

Logged By Au & Mato

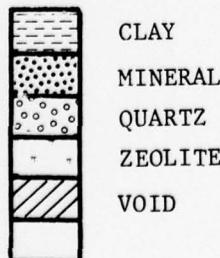


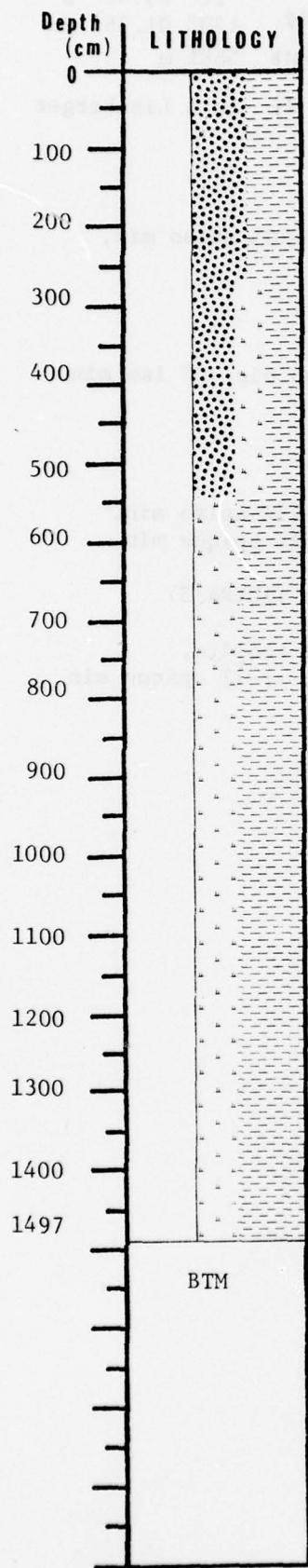
0-120 cm	brown (10YR4/3) MINERAL RICH CLAY 68-84% clay, 10-25% aniso min, 2-3% quartz, 2% opaque min, 2% volcanic glass
120-190 cm	brown (10YR4.5/3 to 10YR4/3) MINERAL CLAY 63-66% clay, 30% aniso min, 2-5% quartz, 1-2% volcanic glass, 1% opaque min
190-475 cm	brown (10YR4/3) to dark brown (10YR3.5/3) MINERAL RICH CLAY 65-79% clay, 15-25% aniso min, 2-7% opaque min, 2-3% quartz, 1% volcanic glass
475-620 cm	brown (10YR4.5/3) CLAY 82-83% clay, 8-10% aniso min, 2-7% quartz, 1-5% opaque min
620-1380 cm	brown (10YR4/3) to dark brown (10YR3.5/3) MINERAL CLAY 40-65% clay, 25-40% aniso min, 5-10% quartz, 1-5% volcanic glass, 0-7% zeolite, 1-5% opaque min
1380-1461 cm	dark brown (10YR3.5/3) QUARTZ RICH CLAY MINERAL SAND 30-40% aniso min, 25-46% clay, 12-18% quartz, 8-10% zeolite, 2-8% opaque min, tr-2% volcanic glass
1461-1649 cm	dark brown (7.5YR3/2) ZEOLITE MINERAL CLAY 33-50% clay, 20-30% aniso min, 15-30% zeolite, 3-5% opaque min, 2-4% quartz, 2-3% volcanic glass

Mottling

Very slight mottling.

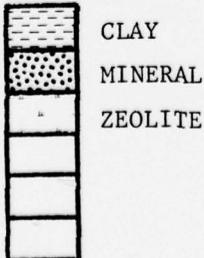
940-943 cm	brown (7.5YR5/4)
1000-1002 cm	
1132-1140 cm	
580-590 cm	core catcher found
489-490 cm	void
580-590 cm	void

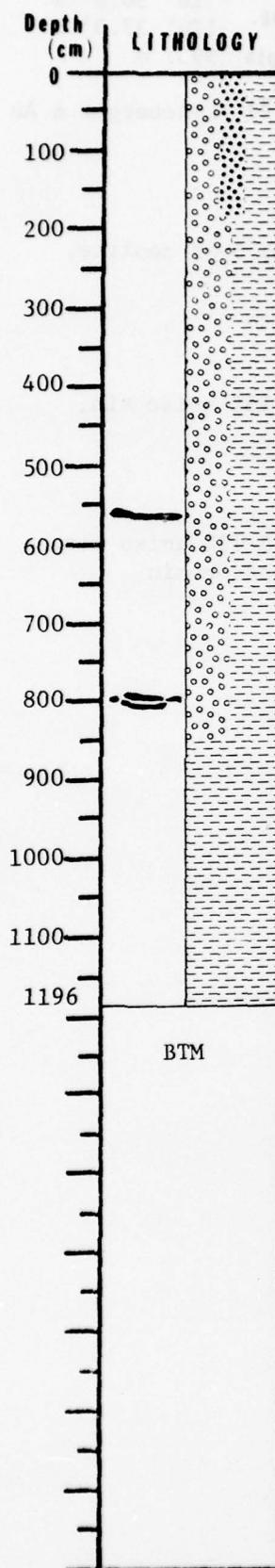
KEY

LITHOLOGIC DESCRIPTION

Core ID	KK75 Sta. 14
PCOD	14
Lat., Long.	26° 56.8' N 170° 37.3' E
Water Depth	5937 m
Logged By Lineberger & Au	
0-270 cm	brown (10YR4/3) MINERAL CLAY 59-62% clay, 25-30% aniso min, 5-8% zeolite, 2-5% iso min, 1% opaque min
270-550 cm	very dark brown (7.5YR2.5/2) to dark brown (7.5YR3/2) MINERAL-ZEOLITE RICH CLAY 63-68% clay, 15-20% zeolite, 15% aniso min, 1% iso min, 1% opaque min
550-1497 cm	very dark brown (7.5YR2.5/2) ZEOLITE RICH CLAY 58-73% clay, 10-15% zeolite, 5-15% aniso min, 8-12% nanno, 1% iso min, 1% opaque min

KEY



LITHOLOGIC DESCRIPTION

0-115 cm brown (10YR4/3)
MINERAL-QUARTZ RICH CLAY
50-68% clay, 15-25% quartz, 15-20% aniso min,
2-3% iso min, 1-2% opaque min

115-180 cm brown (10YR4/3)
MINERAL RICH QUARTZ CLAY
47% clay, 30% quartz, 20% aniso min, 2% iso min,
1% opaque min

180-850 cm brown (10YR4/3)
QUARTZ RICH CLAY
65-77% clay, 10-20% quartz, 7-15% aniso min,
1-6% zeolite, 1-3% iso min, 1-2% opaque min

850-1196 cm dark brown (7.5YR3/2) to brown (10YR4/3)
CLAY
81-86% clay, 3-8% quartz, 2-7% zeolite,
3-5% aniso min, tr-1% iso min, tr-1% opaque min

558-564 cm Mn nodule
797-801 cm Mn nodule

50-55 cm disturbed

190-200 cm

KEY

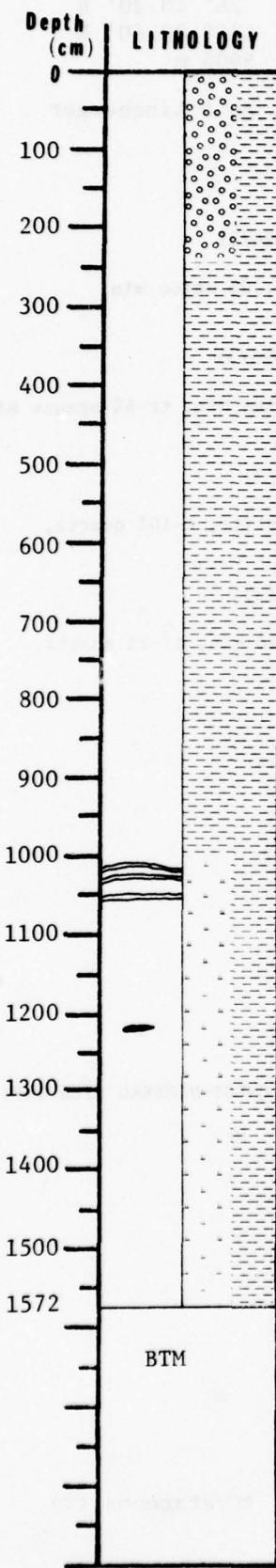


CLAY
QUARTZ
MINERAL
Mn NODULE

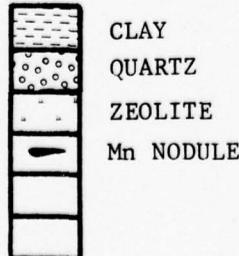
KK75 Sta. 15
Core ID PCOD 15
Lat., Long. 27° 03.42' N
170° 01.76' E
Water Depth 5881 m

Logged By Au & Lineberger

A-17
LITHOLOGIC DESCRIPTION



KEY



- CLAY
- QUARTZ
- ZEOLITE
- Mn NODULE

KK75 Sta. 16
 Core ID PCOD 16
 Lat., Long. 26° 37.46' N
 172° 45.34' E
 Water Depth 5929 m

Logged By Au & Lineberger

0-230 cm brown (10YR4/3)
 QUARTZ RICH CLAY
 74-79% clay, 12-20% quartz, 3-4% aniso min,
 tr-4% zeolite, 1-2% iso min, 1% opaque min

230-1000 cm brown (10YR4/3)
 CLAY
 82-91% clay, 2-8% quartz, 1-7% zeolite,
 tr-4% aniso min, tr-1% iso min, tr-1% opaque min

1000-1572 cm dark brown (7.5YR3/2) to
 very dark brown (7.5YR2.5/2)
 ZEOLITE RICH CLAY
 86-90% clay, 8-11% zeolite, tr-1% aniso min,
 tr-1% opaque min, 0-1% quartz

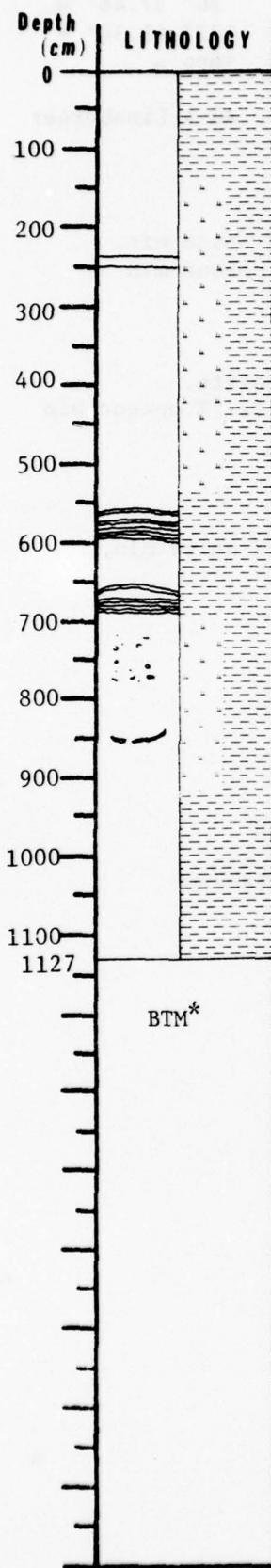
Layering

1010-1012 cm light yellowish brown (10YR6/4)

1020-1022 cm light yellowish brown (10YR6/4)

1050-1051 cm dark grayish brown (10YR4/2)
 ZEOLITE BEARING CLAY MINERAL SAND

1229-1232 cm Mn nodule approximately 1.5 cm diameter

LITHOLOGIC DESCRIPTION

KK75 Sta. 17
 Core ID PCOD 17
 Lat., Long. 26° 18.20' N
 175° 02.60' E
 Water Depth 5905 m
 Logged By Au & Lineberger

0-130 cm dark brown (7.5YR3.5/2) to brown (10YR4/3)
 CLAY
 82-86% clay, 7-10% zeolite, 4% quartz, 2% aniso min,
 1% iso min

130-535 cm dark brown (7.5YR3.5/2) to brown (10YR5/3)
 ZEOLITE RICH CLAY
 62-87% clay, 11-15% zeolite, tr-8% aniso min, tr-6% opaque min,
 tr-5% quartz, tr-1% iso min

535-684 cm dark brown (7.5YR3/2) to brown (10YR5/3)
 CLAY
 67-87% clay, 2-10% aniso min, 2-8% zeolite, 1-10% quartz,
 tr-4% opaque min, tr-8% chert

684-920 cm dark brown (7.5YR3/2) to brown (10YR5/3)
 ZEOLITE RICH CLAY
 71-82% clay, 12-20% zeolite, 1-4% aniso min, tr-2% quartz,
 tr-1% opaque min

920-1125 cm dark brown (7.5YR3/2)
 CLAY
 92-95% clay, 2-5% zeolite, 1% aniso min

Mottling

Very slight mottling.

723-743 cm dark brown (7.5YR3/2)
 753-780 cm

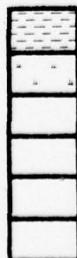
845-847 cm pale brown (10YR6/4)

Layering

235-250 cm brown (10YR5/3)
 QUARTZ-VOLCANIC GLASS-ZEOLITE BEARING CHERT-MINERAL RICH CLAY

569-570 cm dark grayish brown (10YR4/2)
 579-580 cm parallel layering
 591-592 cm
 592-594 cm
 594-596 cm

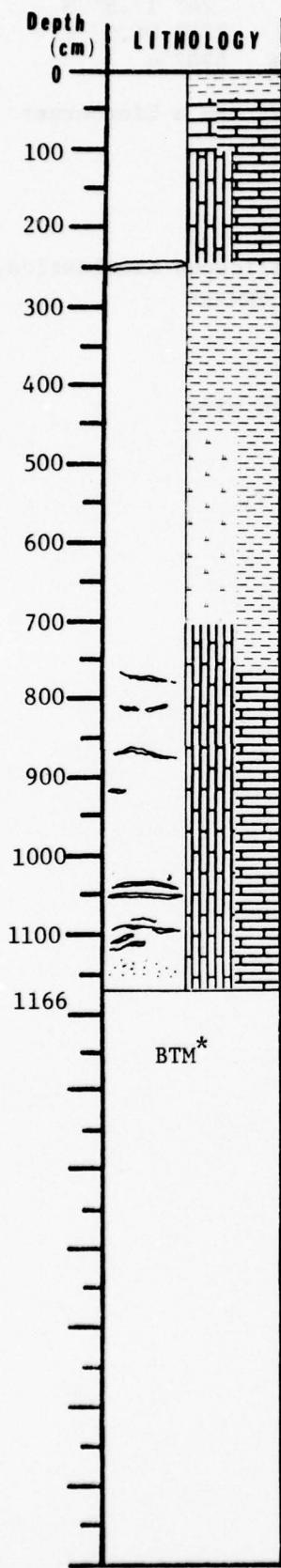
KEY



CLAY

ZEOLITE

*Cretaceous (?)

LITHOLOGIC DESCRIPTION

Core ID KK75 Sta. 18
 PCOD 18
 Lat., Long. 26° 17.86' N
 175° 05.71' E
 Water Depth 5909 m
 Logged By Au & Lineberger

0-24 cm brown (10YR4/3)
 CLAY
 81% clay, 6% non-biogenic carbonate, 4% aniso min, 4% zeolite,
 2% quartz

24-100 cm very pale brown (10YR7/3)
 FORAM BEARING NANNO OOZE
 63% nanno, 20% discoaster, 7% foram, 5% clay, 2% zeolite

100-247 cm very pale brown (10YR7/3)
 CALCAREOUS BIOCLASTIC RICH NANNO OOZE
 44-55% nanno, 20-25% calcareous bioclastics,
 15-20% discoaster, 3-5% foram, 2% zeolite, 1-2% clay,
 tr-1% iso min

247-460 cm brown (10YR4/3) to dark brown (7.5YR3/2)
 CLAY
 76-88% clay, 1-10% calcareous bioclastics, 3-7% zeolite,
 tr-4% nanno, tr-3% iso min, tr-3% quartz, tr-1% discoaster,
 tr-1% opaque min

460-710 cm dark brown (7.5YR3/2)
 ZEOLITE RICH CLAY
 74-96% clay, 10-20% zeolite, 1-2% aniso min, tr-2% quartz,
 tr-1% iso min

710-764 cm very pale brown (10YR7/3)
 CALCAREOUS BIOCLASTIC RICH CLAY
 74% clay, 15% calcareous bioclastics, 7% zeolite,
 1% aniso min, 1% discoaster

764-1166 cm brown (10YR5/3)
 CALCAREOUS BIOCLASTIC NANNO OCZE
 40-45% nanno, 34-40% calcareous bioclastics, 8-15% discoaster,
 2-5% clay, 1-3% foram, tr-3% zeolite

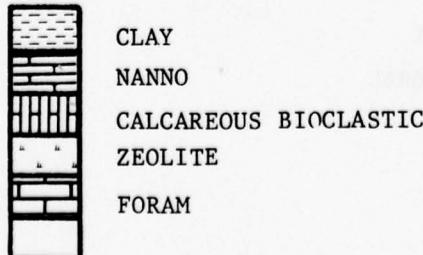
Mottling

Very slight mottling.

780-864 cm white (10YR8/2)
 913-1050 cm
 1085-1155 cm

Layering

243-247 cm white (10YR8/2)
 FORAM-DISCOASTER RICH CALCAREOUS BIOCLASTIC NANNO OOZE

KEY

*Eocene

A-20
LITHOLOGIC DESCRIPTION

South of Lisianski Island

KK75 Sta. 19

FFC 02

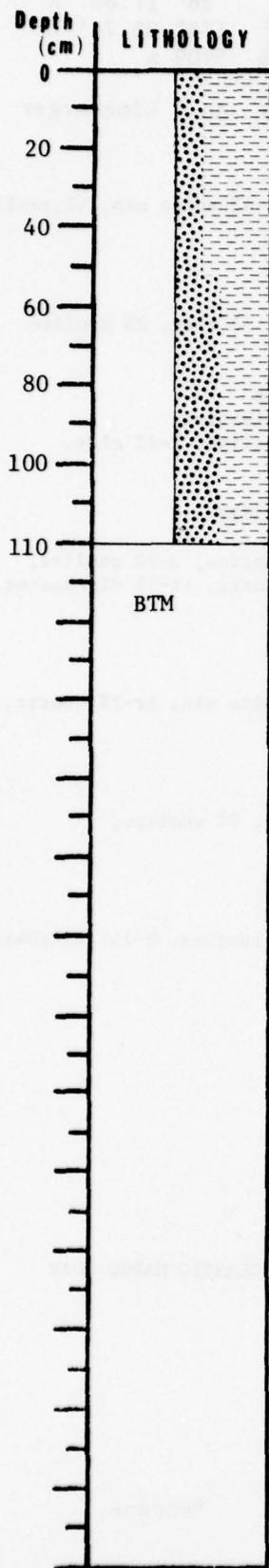
26° 17.8' N

175° 06.0' E

Water Depth

5907 m

Logged By Au & Lineberger



0-52 cm brown (10YR4/3)
MINERAL RICH CLAY
76% clay, 15% aniso min, 3% siliceous bioclastics,
2% iso min, 2% opaque min, 1% sponge

52-110 cm brown (10YR4/3)
MINERAL CLAY
54% clay, 40% aniso min, 2% iso min,
2% opaque min, 1% zeolite

KEY



CLAY

MINERAL

LITHOLOGIC DESCRIPTION

South of Lisianski Island

KK75 Sta. 19

FFC 03

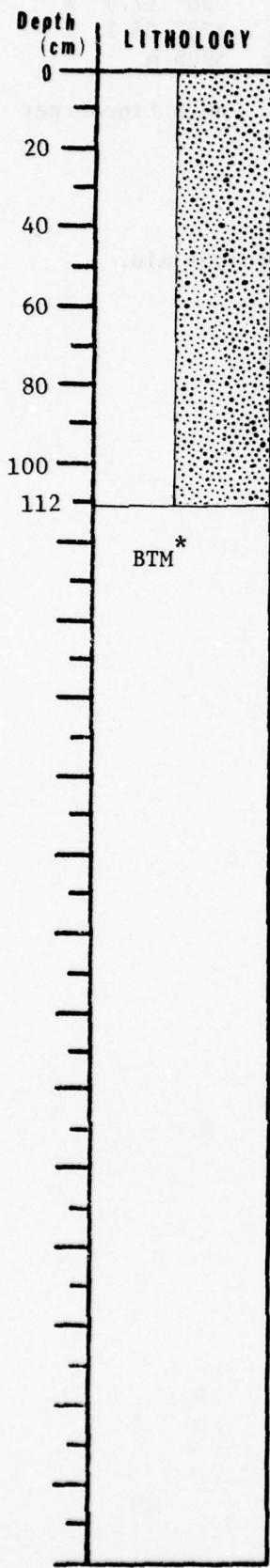
26° 17.9' N

175° 06.0' E

Lat., Long.

Water Depth 5908 m

Logged By Au & Lineberger



*Quaternary

LITHOLOGIC DESCRIPTION

South Honshu Rise

KK76-01-03 Sta. 12

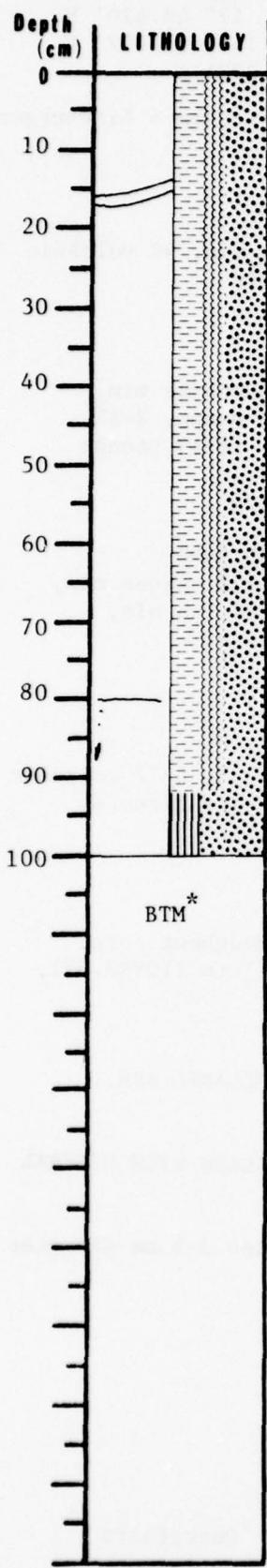
Core ID FFC 03

Lat., Long. 17° 48.791' N

144° 56.492' E

Water Depth 3381 m

Logged By Lineberger & Wenkam



KEY



MINERAL
 SILICEOUS
 CLAY
 VOLCANIC GLASS

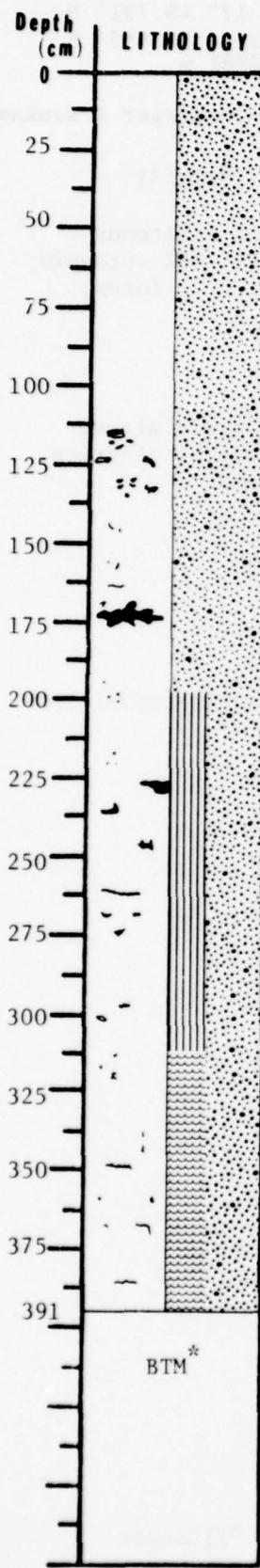
*Pliocene

LITHOLOGIC DESCRIPTION

South Honshu Rise

Core ID KK76-01-03 Sta. 12
 PCOD 01
 Lat., Long. 17° 48.420' N
 144° 53.097' E
 Water Depth 3326 m

Logged By Wenkam & Lineberger



0-75 cm dark brown (10YR3/3)
 MINERAL CLAY
 44% clay, 40% aniso min, 7% opaque min, 4% volcanic glass, 2% rad, 1% diatom, 1% iso min

75-194 cm dark brown (10YR3/3)
 CLAY MINERAL SAND
 30-35% aniso min, 27-33% clay, 10% opaque min, 5-10% rad, 6-8% volcanic glass, 5% nanno, 2-4% diatom, 1-4% siliceous bioclastic, tr-1% sponge

194-310 cm very dark grayish brown (10YR3/2) to dark brown (10YR3/3)
 VOLCANIC GLASS BEARING CLAY MINERAL SAND
 35-39% aniso min, 29-40% clay, 10-12% opaque min, 5-10% volcanic glass, 3-7% rad, 2-3% iso min, 1-3% siliceous bioclastic, tr-4% diatom

310-391 cm very dark grayish brown (10YR3/2) to dark brown (10YR3/3)
 RAD BEARING CLAY RICH MINERAL SAND
 35-45% aniso min, 23% clay, 7-10% rad, 5-7% volcanic glass, 3% iso min, 0-3% nanno, tr-2% siliceous bioclastic, 0-1% ceratolith

Mottling
 Slight to heavy mottling scattered sparsely throughout core; colors range from black through dark brown (N4/) to (10YR2.5/1, 3/1, 3/3, 4/3).

106-209 cm very dark gray (10YR3/1)
 NANNO BEARING MINERAL-CLAY RICH VOLCANIC ASH

114-124 cm dark brown (10YR4/3)
 DIATOM-RAD-CLAY BEARING VOLCANIC GLASS RICH MINERAL SAND

0-106 cm dark brown (10YR3/3) silt Mn-nodules 3-5 cm diameter

KEY



MINERAL CLAY
 VOLCANIC GLASS
 RAD

*Quaternary

LITHOLOGIC DESCRIPTION

South Honshu Rise

KK76-01-03 Sta. 15

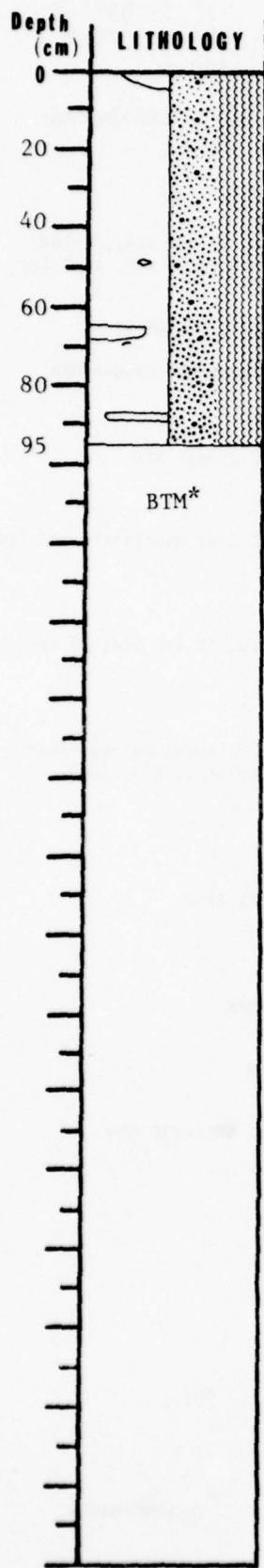
Core ID FFC 04

17° 53.360' N

Lat., Long. 144° 20.191' E

Water Depth 4363 m

Logged By Lineberger & Foreman



0-95 cm dark brown (10YR3/3)
 CLAY RICH MINERAL SILICEOUS OOZE
 25-30% aniso min, 20-30% siliceous bioclastics,
 17-25% clay, 10% rad, 4-7% iso min, 1-7% opaque min,
 2-3% volcanic glass, 2-3% diatom

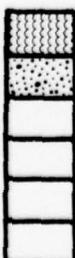
Mottling

Moderate to heavy mottling scattered sparsely throughout core;
 colors range from black (10YR2.5/1) to very dark gray (10YR3/1).

64-68 cm black (10YR2.5/1)
 CLAY-VOLCANIC GLASS RICH MINERAL SAND

68 cm pebble

KEY



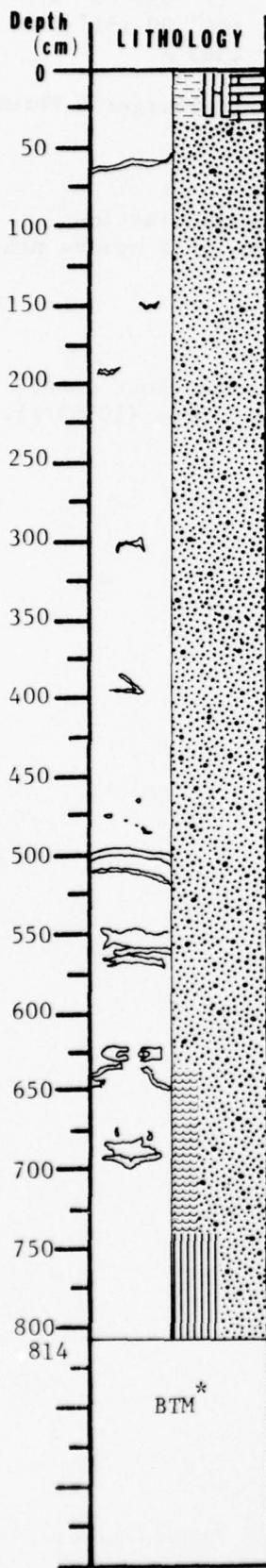
SILICEOUS
 CLAY MINERAL SAND

*Quaternary

LITHOLOGIC DESCRIPTION

West Stewart Basin

KK76-01-03 Sta. 03
 Core ID PCOD 02
 Lat., Long. 7° 39.097' S
 169° 43.070 E
 Water Depth 4750 m
 Logged By Au & Lineberger



0-22 cm dark yellowish brown (10YR4/4)
 CLAY-CALCAREOUS BIOCLASTIC RICH NANNO OOZE
 30-41% nanno, 15-30% calcareous bioclastic, 13-20% clay, 7-10% rad, 5% foram, 5% siliceous bioclastic, 2-4% aniso min, 1-3% iso min, 1-2% diatom, tr-1% opaque min

22-450 cm dark reddish gray (5YR4/2) to brown (10YR4/3, 7.5YR4/4)
 MINERAL CLAY
 63-71% clay, 25-30% aniso min, 1-4% iso min, tr-1% opaque min

450-620 cm brown (7.5YR4/3)
 MINERAL RICH CLAY
 81% clay, 12-15% aniso min, 3% iso min, 1% opaque min

620-740 cm dark reddish gray (5YR4/2)
 RAD RICH MINERAL CLAY
 30% clay, 30% aniso min, 18% rad, 10% siliceous bioclastic, 3% iso min, 3% volcanic glass, 2% opaque min

750-814 cm dark reddish gray (5YR4/2)
 MINERAL RICH CLAY VOLCANIC ASH
 44% volcanic glass, 30% clay, 20% aniso min, 5% iso min, 1% opaque min

Mottling

Very slight to heavy mottling scattered throughout most of core; colors range from dark brown through yellowish brown (7.5YR4/2) to (10YR4/2, 5/3, 5/4).

190-193 cm yellowish brown (10YR5/4)
 470-488 cm MINERAL RICH CLAY

630-650 cm dark grayish brown (10YR4/2)
 DIATOM-VOLCANIC GLASS-RAD RICH CLAY MINERAL SAND

Layering

51-61 cm yellowish brown (10YR5/4)
 RAD-VOLCANIC GLASS BEARING MINERAL RICH CLAY

497-502 cm dark grayish brown (10YR4/2)
 RAD-CLAY BEARING MINERAL RICH VOLCANIC ASH

674-682 cm dark grayish brown (10YR4/2)
 SILICEOUS BIOCLASTIC-RAD RICH CLAY MINERAL VOLCANIC ASH

0-80 cm soupy and disturbed sediments

656-658 cm partially void

KEY

NANNO
 MINERAL CLAY
 VOLCANIC ASH
 CALCAREOUS BIOCLASTIC
 RAD

CLAY

* Quaternary

LITHOLOGIC DESCRIPTION

Stewart Basin

KK76-01-03 Sta. 04

Core 10

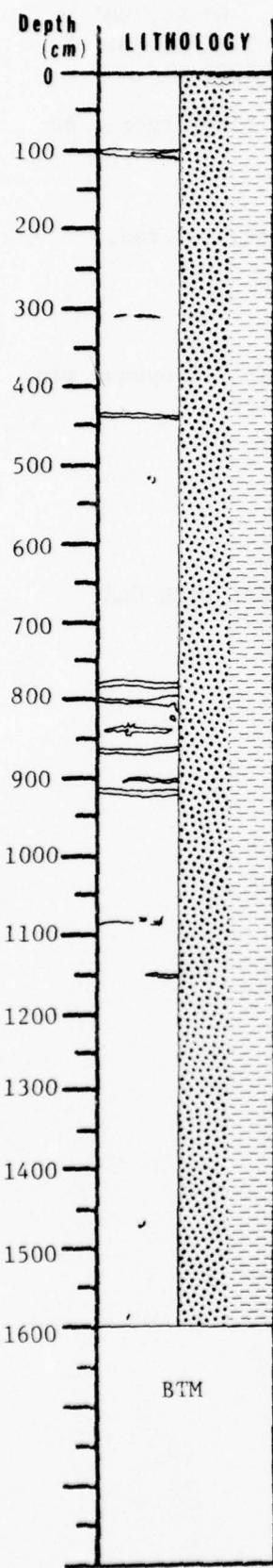
PCOD 03

Lat., Long. 7° 7.112' S

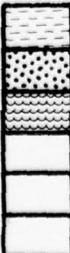
170° 57.878' E

Water Depth 5017 m

Logged By Lineberger & Au



KEY



CLAY
MINERAL
RAD

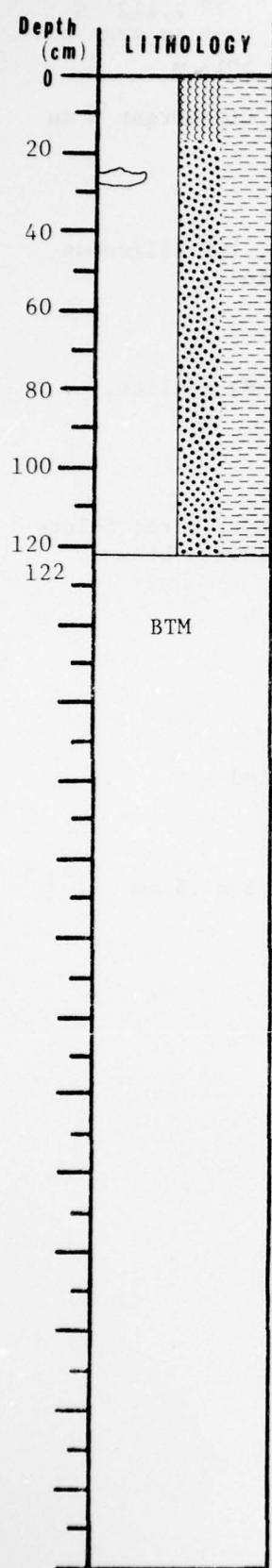
LITHOLOGIC DESCRIPTION

Stewart Basin

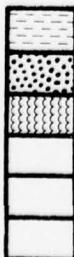
KK76-01-03 Sta. 05

Core ID FFC 11
 Lat., Long. 6° 44.790' S
 171° 45.804' E
 Water Depth 5291 m

Logged By Lineberger & Au



KEY



CLAY
 MINERAL
 SILICEOUS

0-15 cm brown (10YR4/3)
 SILICEOUS RICH CLAY
 57% clay, 25% siliceous bioclastics, 10% rad,
 6% aniso min

15-122 cm brown (10YR4/3)
 MINERAL CLAY
 70% clay, 25% aniso min, 1% iso min, 1% opaque min,
 1% siliceous bioclastics, 1% zeolite

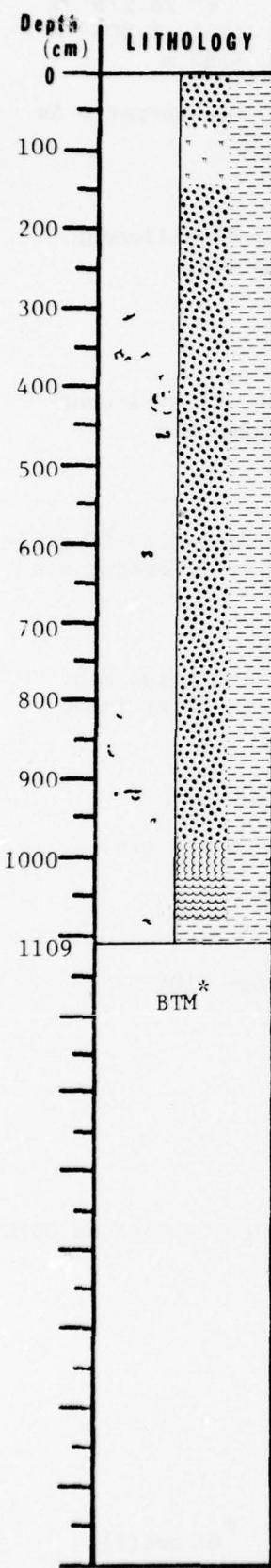
Mottling
 Heavy mottle of yellowish brown (10YR5/4).

22-27 cm yellowish brown (10YR5/4)
 SILICEOUS BIOCLASTIC BEARING MINERAL RICH CLAY

LITHOLOGIC DESCRIPTION

Stewart Basin

Core ID KK76-01-03 Sta. 06
 PCOD 05
 Lat., Long. 4° 43.903' S
 173° 25.652' E
 Water Depth 4716 m
 Logged By Lineberger & Au

KEY

- CLAY
- MINERAL
- SILICEOUS BIOCLAST
- ZEOLITE
- RAD

*Middle Miocene

LITHOLOGIC DESCRIPTION

Stewart Basin

KK76-01-03 Sta. 07

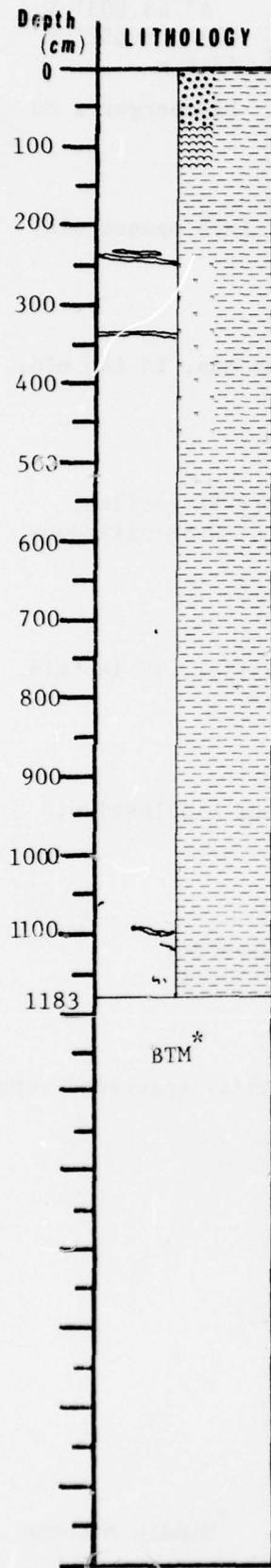
PCOD 06

4° 26.275' S

174° 5.808' E

Water Depth 5182 m

Logged By Lineberger & Au



0-75 cm brown (10YR4/3)
MINERAL RICH CLAY
75-84% clay, 6-10% aniso min, 2-8% siliceous
bioclastics, 3-4% rad, 1-2% iso min,
tr-1% opaque min, 0-1% diatom

75-125 cm brown (10YR4/3)
RAD RICH CLAY
71% clay, 15% rad, 7% aniso min, 4% siliceous
bioclastics, 1% iso min, 1% opaque min

125-245 cm brown (10YR4/3)
CLAY
82-86% clay, 5-6% aniso min, 3-5% rad, 3-4% sili-
ceous bioclastics, 1% iso min, tr-1% opaque min

245-475 cm brown (10YR4/3)
ZEOLITE RICH CLAY
67-79% clay, 15-20% zeolite, 3-10% aniso min,
1-3% iso min, 1-2% opaque min, tr-1% siliceous
bioclastics

475-1183 cm brown (10YR4/3) to (7.5YR4/2)
CLAY
71-92% clay, 1-7% zeolite, 2-5% aniso min,
1-2% iso min, 1-2% opaque min

Mottling

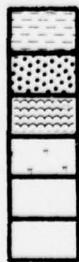
Very slight to slight mottling of yellowish brown (10YR5/4)
scattered sparsely in core.

Layering

235-239 cm yellowish brown (10YR5/4)
MINERAL BEARING RAD RICH CLAY

335-337 cm grayish brown (10YR5/2)
CLAY BEARING ZEOLITE-MINERAL RICH CALCAREOUS OOZE

KEY



CLAY

MINERAL

RAD

ZEOLITE

* Eocene(?)

LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 03

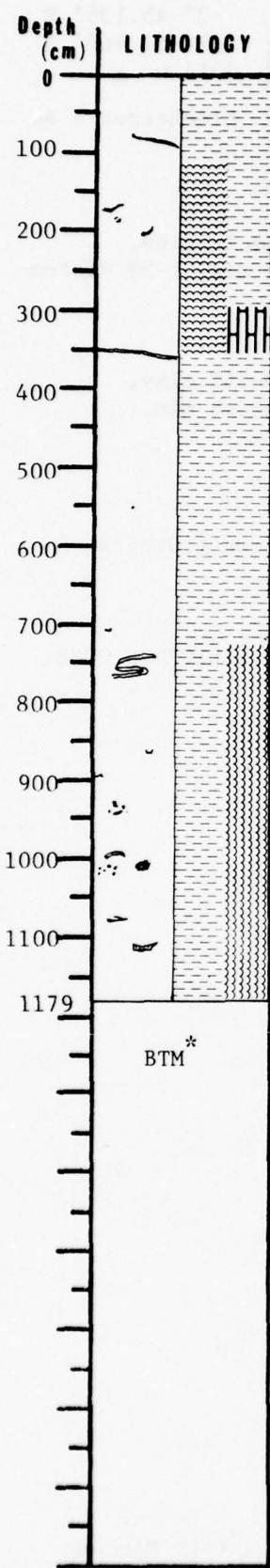
Core ID PCOD 07

2° 45.448' S

Lat., Long. 177° 53.531' E

Water Depth 5317 m

Logged By Lineberger & Au

KEY

- CLAY
- CALCAREOUS
- SILICEOUS
- RAD

*Late Miocene

LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 08

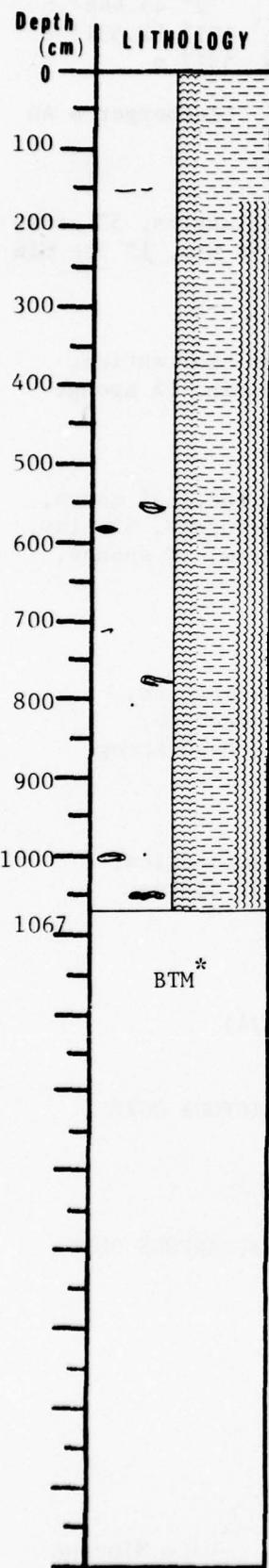
Core ID PCOD 08

Lat., Long. 2° 45.136' S

177° 51.468' E

Water Depth 5314 m

Logged By Lineberger & Au



0-118 cm brown (10YR4/3)
 RAD RICH CLAY
 41-66% clay, 15-25% siliceous bioclastics,
 10-20% rad, 5% aniso min, 2% iso min, 1-5% diatom

118-1067 cm brown (10YR4/3) to (7.5YR4/2)
 RAD RICH CLAY SILICEOUS OOZE
 25-54% siliceous bioclastics, 20-55% clay,
 15-40% rad, 2-8% iso min, 1-8% aniso min,
 0-7% diatom, 0-1% opaque min

Mottling

Very slight to slight mottling of yellowish brown (10YR5/4)
 scattered sparsely in core.

564-567 cm yellowish brown (10YR5/4)
 MINERAL-DIATOM BEARING CLAY RICH SILICEOUS OOZE

* Late Miocene

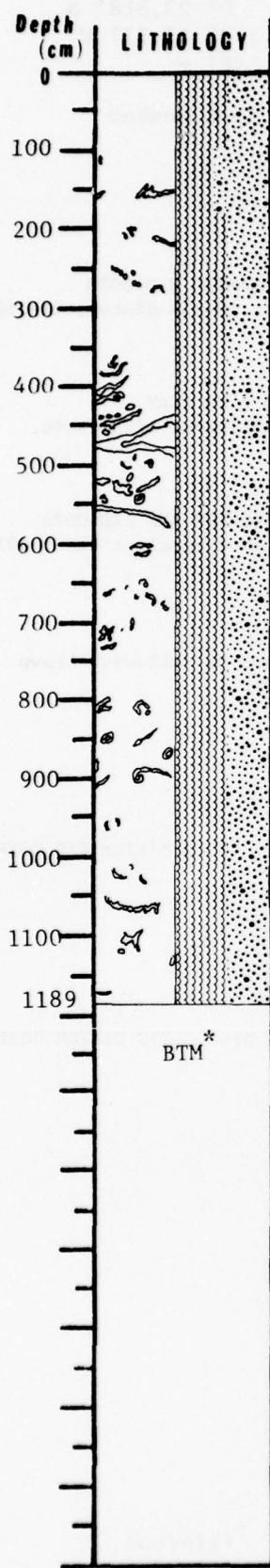
LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 10

Core ID PCOD 09
 Lat., Long. 1° 5.976' S
 179° 29.312' E
 Water Depth 5391 m

Logged By Au & Wenkam



*Pliocene

LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 11

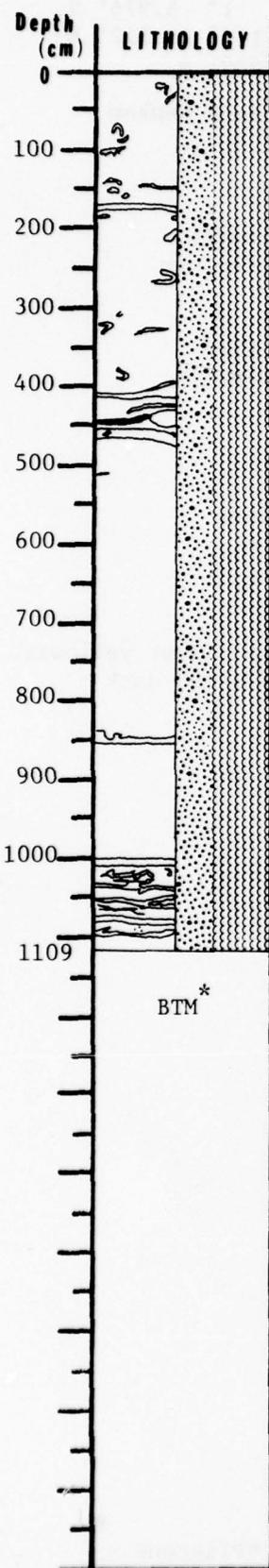
Core ID PCOD 10

0° 23.818' N

178° 57.777 W

Water Depth 5387 m

Logged By Au & Wenkam



0-175 cm dark brown (10YR4/3)
 MINERAL-CLAY-DIATOM RICH SILICEOUS BIOCLASTIC RAD OOZE
 25-30% rad, 22-30% siliceous bioclastic, 10-15% diatom, 12-25%
 clay, 5-18% aniso min, 3-5% iso min

175-225 cm dark brown (10YR4/3)
 DIATOM-SILICEOUS BIOCLASTIC-RAD-MINERAL RICH CLAY
 30% clay, 20% rad, 18% aniso min, 14% siliceous bioclastic,
 10% diatom, 5% iso min

225-1109 cm brown (10YR5/3) to dark brown (10YR4/3)
 MINERAL-CLAY-SILICEOUS BIOCLASTIC RICH DIATOM AND RAD OOZE
 10-30% rad, 10-30% diatom, 11-39% siliceous bioclastics, 6-30%
 clay, 3-14% aniso min, 2-12% iso min

Mottling

Very slight to moderate mottling throughout core; brown to yellowish brown (10YR5/3 to 5/4) and very dark grayish brown (10YR3/2).

Layering

176-180 cm brown (10YR5/3)

400-406 cm yellowish brown (10YR5/4)
 CLAY-MINERAL BEARING SILICEOUS BIOCLASTIC RICH DIATOM RAD OOZE

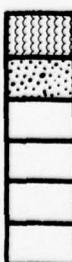
456-471 cm yellowish brown (10YR5/4)

1000-1006 cm
 1027-1038 cm
 1048-1053 cm

1066-1078 cm yellowish brown (10YR5/4)
 MINERAL-CLAY BEARING RAD RICH SILICEOUS BIOCLASTIC DIATOM OOZE

1095-1102 cm yellowish brown (10YR5/4)

KEY



SILICEOUS

MINERAL CLAY

* Pliocene

LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 12

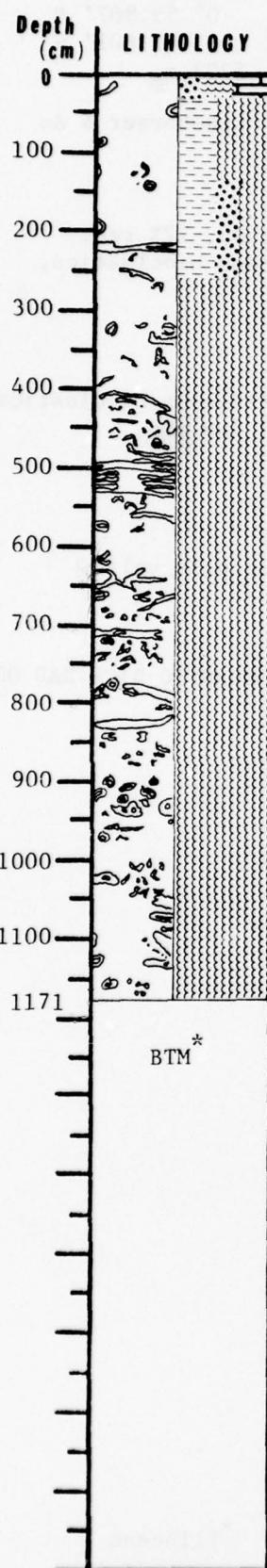
Core ID PCOD 11

Lat., Long. 0° 56.056' N

178° 40.480' W

Water Depth 5219 m

Logged By Au & Wenkam



0-25 cm dark brown (10YR4/3)
MINERAL-RAD RICH NANNO OOZE
30% nanno, 23% calcareous bioclastics, 25% rad,
8% aniso min, 8% iso min, 6% clay

25-125 cm dark brown (10YR4/3.5)
CLAY RICH SILICEOUS BIOCLASTIC RAD OOZE
30% rad, 25-30% siliceous bioclastics, 20-30% clay,
10-20% iso min

125-275 cm dark brown (10YR4/3)
DIATOM-MINERAL-RAD RICH CLAY
25 - 35% clay, 20-30% rad, 7-15% diatom, 7-15% iso
min, 4-15% aniso min

275-1171 cm brown (10YR5/3 to 4.5/3) to dark brown (10YR4/3)
SILICEOUS BIOCLASTIC RICH DIATOM RAD OOZE
30-54% rad, 16-43% diatom, 7-27% siliceous
bioclastics, 5-15% clay, 2-20% minerals

Mottling

Very slight to heavy mottling throughout core of pale yellow (2.5Y7/4).

Layering

210-214 cm pale yellow (2.5Y7/4)

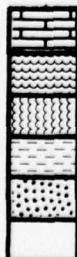
495-508 cm

511-523 cm pale yellow (2.5Y7/4)
series of connected parallel layers
CLAY BEARING SILICEOUS BIOCLASTIC RICH RAD DIATOM OOZE

607-608 cm pale yellow (2.5Y7/4)

609-612 cm

808-814 cm pale yellow (2.5Y7/4)
CLAY-SILICEOUS BIOCLASTIC BEARING DIATOM RAD OOZE

KEY

NANNO

RAD

SILICEOUS

CLAY

MINERAL

*Middle Miocene

LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 12

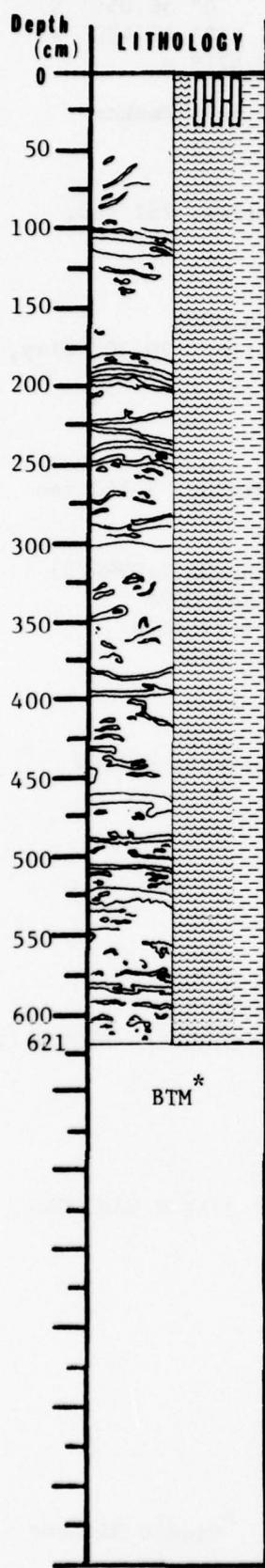
PCOD 12

0° 55.867' N

178° 41.601' W

Water Depth 5203 m

Logged By Lineberger & Au



0-33 cm brown (10YR4/3 to 5/3)
RAD RICH CLAY CALCAREOUS OOZE
35% calcareous bioclastics, 34% clay, 12% rad,
5% aniso min, 5% nanno, 5% siliceous bioclastics,
2% diatom

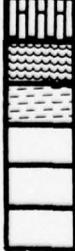
33-621 cm brown (10YR4.5/3 to 4/3)
CLAY RICH RAD OOZE
40-60% rad, 15-35% clay, 7-21% siliceous bioclastics,
5-10% diatom, tr-3% sponge, tr-2% iso min,
tr-1% aniso min, tr-1% opaque min

Mottling

Very slight to heavy mottling throughout core of pale yellow (2.5Y7/4).

106-110 cm pale yellow (2.5Y7/4)
521-526 DIATOM BEARING CLAY-SILICEOUS BIOCLASTIC RICH RAD OOZE

KEY



CALCAREOUS

RAD

CLAY

* Pliocene

LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 13

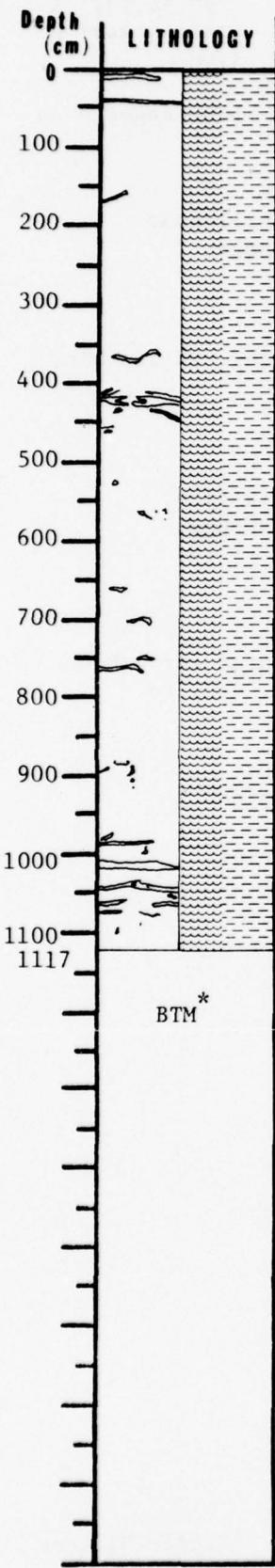
Core ID PCOD 13

Lat., Long. 2° 40.089' N

178° 45.093' W

Water Depth 5419 m

Logged By Lineberger & Au



*Pliocene

LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 14

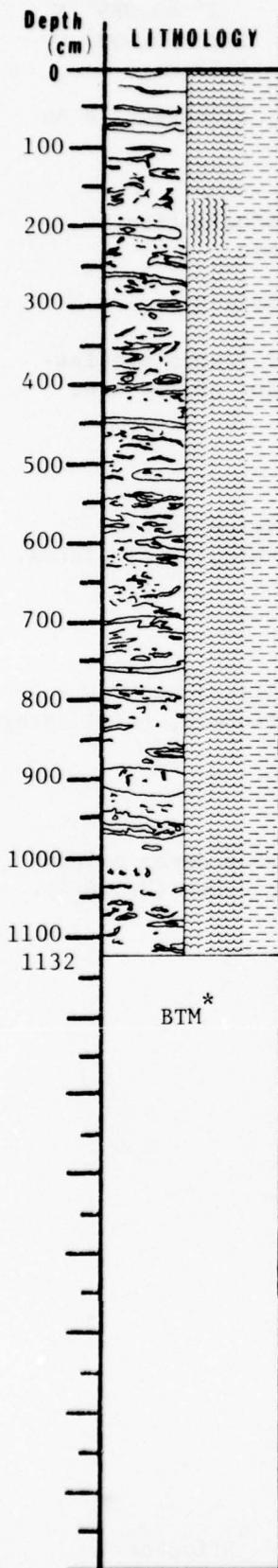
Core ID PCOD 14

2° 54.731' N

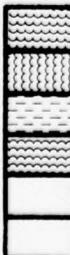
178° 30.847' W

Water Depth 5290 m

Logged By Lineberger & Au



KEY



RAD
SILICEOUS
CLAY
DIATOM

*Middle Miocene

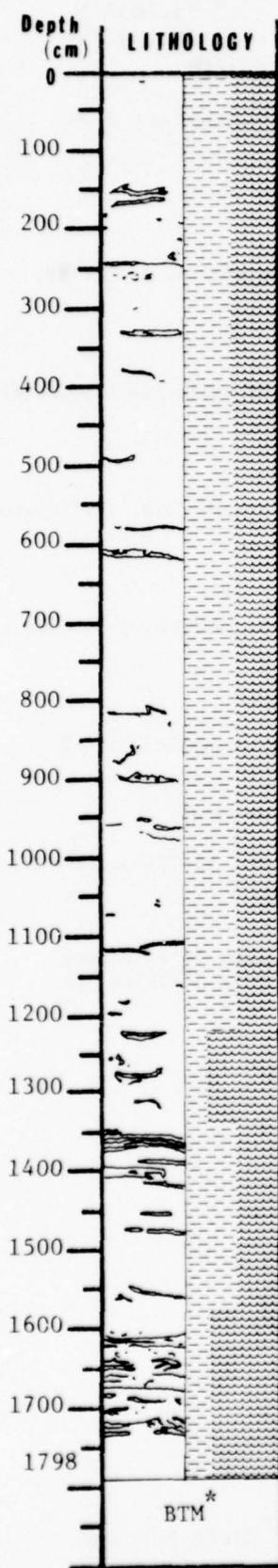
A-39
LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 15

Core ID PCOD 15
Lat., Long. 02° 56.351' N
Water Depth 178° 32.144' W
5412 m

Logged By Lineberger & Au



0-425 cm dark brown (10YR3/3) to dark grayish brown (10YR4/2)
CLAY RAD OOZE
40-47% rad, 37-45% clay, 5-10% siliceous bioclastics, 3-7% diatom,
1% aniso min, tr-1% iso min, tr-1% opaque min

425-675 cm brown (10YR4/3) to dark grayish brown (10YR4/2)
RAD RICH CLAY
53-76% clay, 15-35% rad, 5-8% siliceous bioclastics, 1-3% aniso
min, tr-2% diatom, tr-2% iso min, tr-2% opaque min

675-1225 cm dark grayish brown (10YR4/2) to brown (10YR5/3)
CLAY RAD OOZE
40-51% rad, 30-49% clay, 6-10% siliceous bioclastics, 1-7% diatom,
tr-1% aniso min, tr-1% sponge, tr-1% iso min, tr-1% opaque min

1225-1368 cm brown (10YR4/2.5)
CLAY RICH RAD OOZE
47-54% rad, 25-35% clay, 10-15% siliceous bioclastics, 5-8%
diatom, 1% sponge, tr-1% iso min

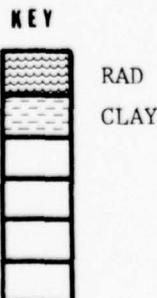
1368-1575 cm dark grayish brown (10YR4/2)
CLAY RAD OOZE
40-50% rad, 30-41% clay, 10-15% siliceous bioclastics, 4-7%
diatom, tr-3% opaque min, tr-1% aniso min, tr-1% sponge

1575-1798 cm dark grayish brown (10YR4/2)
CLAY RICH RAD OOZE
49-55% rad, 25% clay, 10-15% siliceous bioclastics, 7-8% diatom,
1% sponge, tr-2% opaque min, tr-1% aniso min, tr-1% iso min

Mottling

Very slight to heavy mottling scattered throughout core; colors range from dark grayish brown to light yellowish brown (10YR4/1.5, 5/3, 5/4, 6/4).

0-19 cm disturbed
463-470 cm disturbed



*Quaternary

LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 16

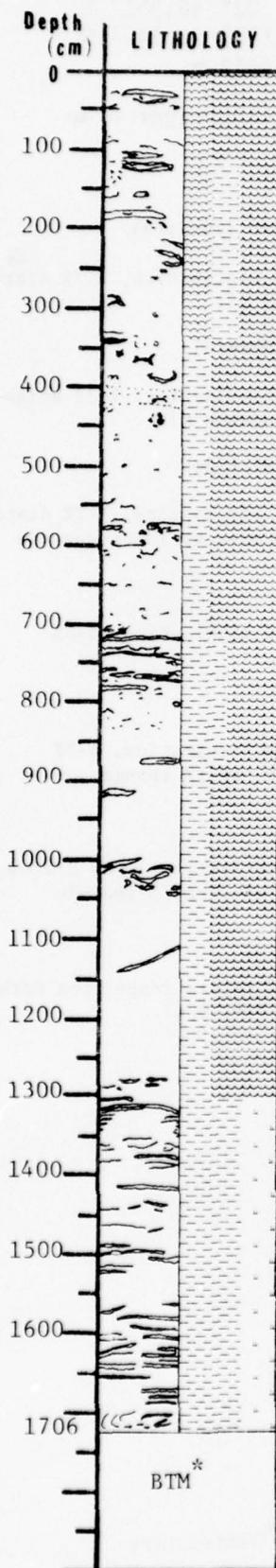
Core ID PCOD 16

4° 33.705' N

Lat., Long. 176° 33.109' W

Water Depth 5197 m

Logged By Lineberger & Au



0-105 cm	brown (10YR5/3) DIATOM RICH RAD OOZE 68-70% rad, 12% diatom, 10% siliceous bioclastics, 5-7% clay, 1% sponge
105-325 cm	brown (10YR4.5/3) DIATOM-CLAY RICH RAD OOZE 60-63% rad, 12-15% clay, 10-12% diatom, 10% siliceous bioclastics, 1% sponge
325-710 cm	brown (10YR4.5/3) CLAY RICH RAD OOZE 65-69% rad, 15-20% clay, 8-10% siliceous bioclastics, 2-7% diatom, tr-1% sponge, tr-1% aniso min
710-875 cm	brown (10YR4/3) RAD CLAY 44-54% clay, 40-50% rad, 2-5% siliceous bioclastics, 1-3% opaque min, tr-2% iso min, tr-1% diatom
875-1298 cm	brown (10YR4/3) to yellowish brown (10YR5/5) CLAY RICH RAD OOZE 67-78% rad, 12-20% clay, 7-10% siliceous bioclastics, tr-1% diatom
1298-1706 cm	dark brown (10YR3/3) to yellowish brown (10YR5/4) ZEOLITE CLAY 51-58% clay, 35-45% zeolite, tr-3% aniso min, tr-2% opaque min

Mottling

Very slight to heavy mottling densely concentrated throughout core: colors range from dark brown to pale yellow (10YR4.5/3, 3/3, 4/2) to (7.5YR7/4) to (2.5Y7/4).

722-735 cm	dark grayish brown (10YR4/2) SILICEOUS BIOCLASTIC BEARING CLAY RAD OOZE
73-80 cm	disturbed
1423-1424 cm	void
1436-1437 cm	void

1664-1678 cm semi-lithified layer

KEY

RAD
DIATOM
CLAY
ZEOLITE

* Early Miocene

LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 16

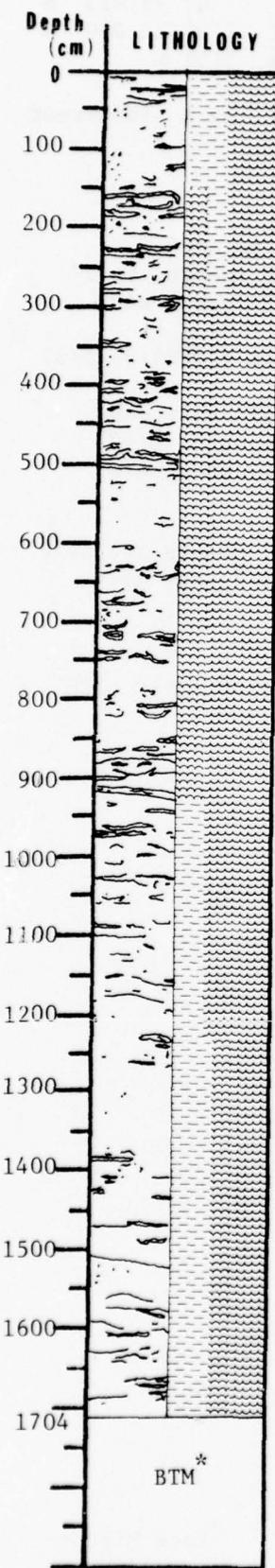
Core ID PCOD 17

Lat., Long. 4° 34.360' N

176° 35.253' W

Water Depth 5240 m

Logged By Lineberger & Au



0-145 cm grayish brown (10YR5/2) to brown (10YR4/3)
 RAD CLAY
 38-45% clay, 37-45% rad, 10% siliceous bioclastics,
 3-4% diatom, tr-2% aniso min, tr-1% iso min

145-280 cm light brownish gray (10YR6/2) to gray (10YR5/1)
 DIATOM-CLAY RICH RAD OOZE
 51-72% rad, 12-25% clay, 10-15% siliceous bioclastics,
 10-12% diatom, tr-1% aniso min, tr-1% iso min,
 tr-1% opaque min, tr-1% sponge

280-925 cm light brownish gray (10YR6/2) to grayish brown
 (10YR5/2)
 DIATOM RICH RAD OOZE
 59-72% rad, 10-15% siliceous bioclastics, 8-12%
 diatom, 8-10% clay, tr-2% sponge, tr-1% aniso min,
 tr-1% iso min

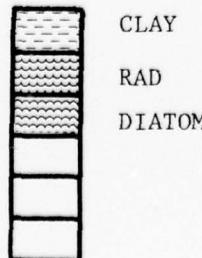
925-1225 cm pale brown (10YR6/3) to brown (10YR5/3)
 CLAY RICH RAD OOZE
 51-64% rad, 15-20% clay, 15% siliceous bioclastics,
 3-10% diatom, 1% sponge, tr-1% aniso min

1225-1704 cm pale brown (10YR6/3)
 DIATOM RICH CLAY RAD OOZE
 40-51% rad, 20-30% clay, 10-15% diatom, 10-15%
 siliceous bioclastics, 1% sponge, tr-1% aniso min,
 tr-1% iso min

Mottling

Very slight to heavy mottling scattered densely throughout core;
 colors of white to pale yellow (2.5Y8/3), brown (10YR4/3) and
 very dark gray (10YR3/1).

162-194 cm white to pale yellow (2.5Y8/3)

708-748 cm SPONGE-CLAY-DIATOM BEARING SILICEOUS BIOCLASTIC
 RICH RAD OOZEKEY

* Middle Miocene

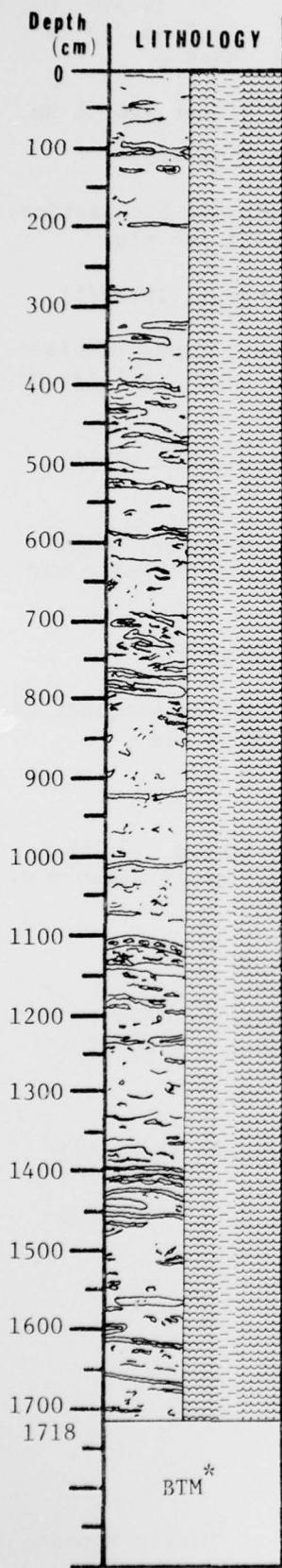
LITHOLOGIC DESCRIPTION

Central Pacific Basin

KK76-01-03 Sta. 16

Core ID PCOD 18
 Lat., Long. 4° 35.023' N
 176° 37.089' W
 Water Depth 5151 m

Logged By Au & Lineberger



0-175 cm brown (10YR4/3 to 5/3)
 DIATOM-CLAY RICH RAD OOZE
 42-55% rad, 15-30% siliceous bioclastics,
 12-20% clay, 5-15% diatom, 1-2% sponge, tr-1%
 aniso min, tr-1% iso min, tr-1% opaque min

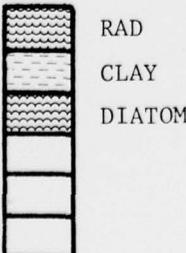
175-1718 cm grayish brown (10YR5/2) to brown (10YR4/3, 5/3)
 CLAY RICH RAD-DIATOM OOZE
 25-47% diatom, 25-47% rad, 10-15% siliceous
 bioclastics, 8-15% clay, 1-2% sponge, tr-2%
 sio min, tr-1% aniso min, tr-1% opaque min

Mottling

Very slight to heavy mottling throughout core; colors are pale yellow (2.5Y7/4) to light brownish gray (10YR6/2) and pale brown (10YR6/3).

1562-1570 cm pale yellow (2.5Y7/4)
 SPONGE BEARING CLAY-SILICEOUS BIOCLASTIC RICH
 DIATOM-RAD OOZE

KEY



* Late Miocene

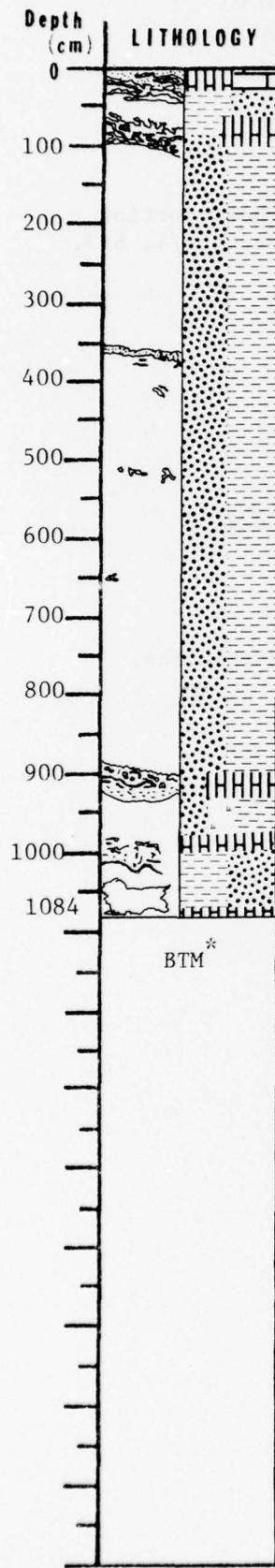
LITHOLOGIC DESCRIPTION

Hawaiian Islands

KK76-08-06 Sta. 01

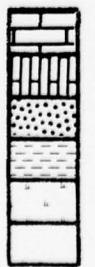
Core ID PCOD 01
 Lat., Long. 22° 22.350' N
 165° 30.855' W
 Water Depth 4641 m

Logged By Lineberger & Mato



0-22 cm	white (10YR8/1) CALCAREOUS BIOCLASTIC RICH FORAM OOZE 51% foram, 45% calcareous bioclastics, 1% nanno
22-77 cm	brown (10YR4/4) to dark yellowish brown (10YR4/4) MINERAL CLAY 54% clay, 35% aniso min, 5% opaque min, 5% zeolite, 1% iso min
77-84 cm	light yellowish brown (10YR6/4) CLAY RICH CALCAREOUS OOZE 46% calcareous bioclastics, 20% clay, 20% foram, 5% nanno, 2% aniso min, 2% discoaster, 2% zeolite, 1% opaque min
84-93 cm	brown (10YR5/3 to 5.5/3) MINERAL RICH CALCAREOUS OOZE 40% foram, 32% calcareous bioclastics, 15% aniso min, 7% clay, 3% zeolite, 1% nanno, 1% opaque min
93-885 cm	brown (10YR4/3) MINERAL CLAY 20-57% clay, 25-46% aniso min, 10-25% opaque min, tr-15% zeolite, 0-5% iso min
885-900 cm	very pale brown (10YR6.5/3) CLAY MINERAL SAND 38% clay, 27% aniso min, 10% opaque min, 8% calcareous bioclastics, 7% discoaster, 2% zeolite, 2% iso min, 2% nanno
900-917 cm	pale brown (10YR6/3) to brownish yellow (10YR6/5) MINERAL RICH CALCAREOUS OOZE 30-60% calcareous bioclastics, 12-15% aniso min, 10-15% clay, tr-24% nanno, 5-6% zeolite, 3-6% opaque min, 1-3% iso min, 0-9% discoaster, 0-8% foram
917-985 cm	brown (10YR4/3) ZEOLITE RICH MINERAL CLAY 32-35% clay, 30-35% aniso min, 15-18% zeolite, 15% opaque min, 2-3% iso min
985-1003 cm	brown (10YR6/3) to light gray (10YR7/2) CALCAREOUS OOZE 45-52% calcareous bioclastics, 3-20% foram, 2-15% nanno, 6-10% aniso min, 2-10% zeolite, 7-8% clay, 5-8% opaque min, 1% iso min
1003-1083 cm	brown (10YR4/3) CLAY MINERAL SAND 35% aniso min, 33% clay, 20% zeolite, 10% opaque min, 2% iso min
1083-1084 cm	pale brown (10YR6/3) CALCAREOUS OOZE 55% calcareous bioclastics, 20% foram, 7% clay, 5% aniso min, 5% opaque min, 5% zeolite

KEY



FORAM
CALCAREOUS
MINERAL
CLAY
ZEOLITE

* Pleistocene (N22)

KK76-08-06 Sta. 01
PCOD 01
(continued)

Mottling

Very slight to heavy mottling concentrated in uppermost and lowermost portion of core; colors range from very dark grayish brown to white (10YR6/4, 4/4, 6/3, 5/3, 4/3, 3/3, 7/2, 3/2, 8/1, 4/1) to (7.5YR4/4).

25-75 cm brown (7.5YR4/4)
ZEOLITE BEARING MINERAL CLAY

84-85 cm light yellowish brown (10YR6/4)
ZEOLITE-CLAY BEARING MINERAL RICH FORAM OOZE

997-1001 cm brown (10YR5/3) to pale brown (10YR6/3)
1003-1083 cm NANNO-ZEOLITE-CLAY BEARING MINERAL-FORAM RICH CALCAREOUS
BIOCLASTIC OOZE

Layering

Layering show graded bedding and are slightly mottled, probably turbidites.

0-22 cm white (10YR8/1)
CALCAREOUS OOZE

84-93 cm brown (10YR5/3)

351-359 cm very dark gray (10YR3/1)

1038-1039 cm pale brown (10YR6/3)

1003-1083 cm disturbed; flow-in during coring

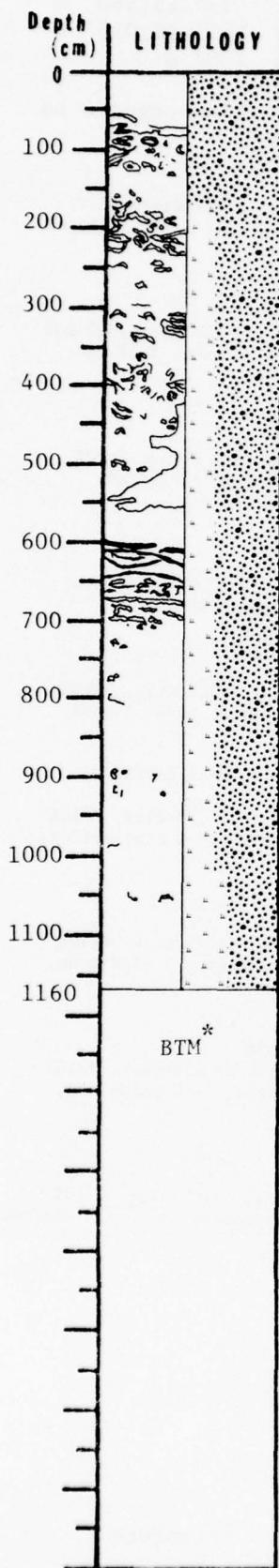
LITHOLOGIC DESCRIPTION

East of Hess Rise

KK76-08-06 Sta. 8

Core ID PCOD 02
 Lat., Long. $32^{\circ} 30.863' N$
 $175^{\circ} 51.398' E$
 Water Depth 5207 m

Logged By Lineberger & Mato



0-175 cm brown (10YR4/3)
 MINERAL CLAY
 57-61% clay, 35% aniso min, 1-5% opaque min,
 tr-2% siliceous bioclastics, tr-1% iso min

175-1025 cm brown (10YR4/3 to 7.5YR3.5/3)
 ZEOLITE BEARING MINERAL CLAY
 58-74% clay, 15-35% aniso min, tr-10% zeolite,
 tr-1% opaque min

1025-1160 cm brown (7.5YR3.5/3)
 ZEOLITE-MINERAL RICH CLAY
 64-67% clay, 20% aniso min, 12-15% zeolite

Mottling

Very slight to heavy mottling throughout core; colors range from very dark gray through brownish yellow (10YR6/8, 5/8, 6/6, 6/5, 6/4, 5/4, 4/4, 5/3, 4/3, 3/2, 3/1) and (7.5YR6/4).

63-70 cm light brown (7.5YR6/4)
 SILICEOUS BIOCLASTIC BEARING MINERAL CLAY

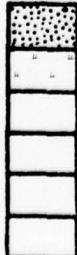
315-329 cm yellowish brown (10YR5/8)
 329-335 cm brownish yellow (10YR6/8)
 ZEOLITE BEARING MINERAL CLAY

Layering

622-624 cm brown (10YR4/2.5)

440-560 cm disturbed; flow-in during coring

KEY



MINERAL CLAY
 ZEOLITE

* Middle Miocene

LITHOLOGIC DESCRIPTION

East of Hess Rise

KK76-08-06 Sta. 09

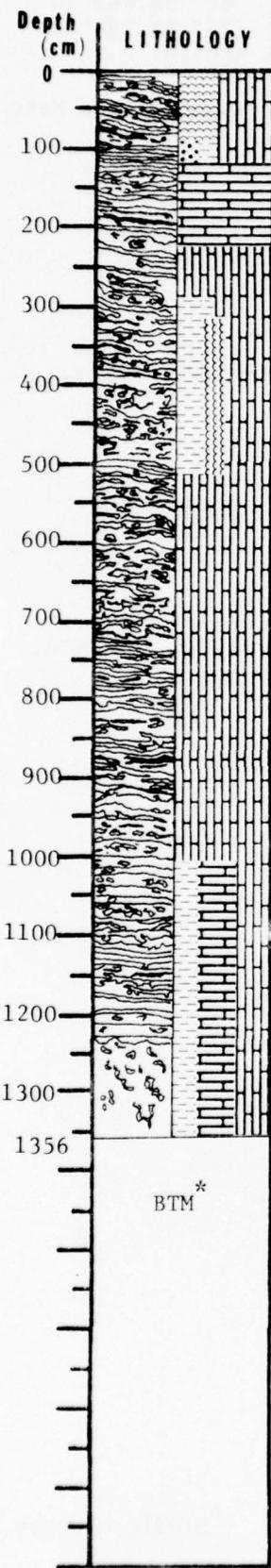
Core ID PCOD 03

Lat., Long. 33° 15.560' N

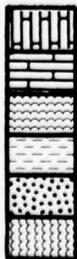
175° 18.015' E

Water Depth 4187 m

Logged By Lineberger & Au



KEY



CALCAREOUS
NANNO
DIATOM
CLAY
MINERAL
SILICEOUS

*Pliocene

KK76-08-06 Sta. 09
 PCOD 03
 (continued)

1011-1356 cm brown (10YR5/2.5) to gray (2.5YR5/1)
 CLAY RICH CALCAREOUS BIOCLASTIC-NANNO OOZE
 25-79% nanno, 20-45% calcareous bioclastics, 3-15% clay,
 2-15% aniso min, 1-10% foram, tr-3% diatom, tr-3% rad

Mottling

Very slight to heavy mottling throughout core; colors range from brown through white (10YR6/6, 5/4, 6/4, 5/3, 6/3, 7/3, 4/2, 5/2, 6/2, 7/2, 8/2, 4/1, 6/1, 7/1) to (7.5YR7/2) to (2.5YR6/3).

13-18 cm brown (10YR5/3)
 MINERAL-FORAM-RAD BEARING DIATOM-CLAY RICH CALCAREOUS OOZE

390-398 cm dark grayish brown (10YR4/2)
 DIATOM-RAD-FORAM BEARING MINERAL RICH CLAY CALCAREOUS OOZE

797-805 cm light yellowish brown (10YR6/4)
 820-826 cm very pale brown (10YR7/3)
 836-844 cm light brownish gray (10YR6/2)
 850-868 cm white (10YR8/1)
 DIATOM-RAD-MINERAL-CLAY-SILICEOUS BIOCLAST BEARING CALCAREOUS OOZE

1089-1091 cm black (10YR2.5/1)
 1128 cm very pale brown (10YR6.5/3)
 RAD-FORAM BEARING MINERAL CLAY RICH NANNO-CALCAREOUS BIOCLASTIC OOZE

1142-1146 cm light grayish brown (2.5Y6/2)
 FORAM-DISCOASTER-MINERAL-CLAY BEARING CALCAREOUS BIOCLASTIC RICH NANNO OOZE

1215-1356 cm white (10YR8/2) to pale brown (10YR6/2.5)
 FORAM-MINERAL-CLAY BEARING DISCOASTER RICH NANNO OOZE

Layering

32-35 cm grayish brown (10YR5/2)
 MINERAL-RAD-FORAM-CLAY BEARING CALCAREOUS BIOCLAST NANNO OOZE

0-58 cm disturbed; very soft sediments

1215-1356 cm disturbed; apparent flow-in during coring operation

1236-1238 cm void; sediment sheared apart during coring operation

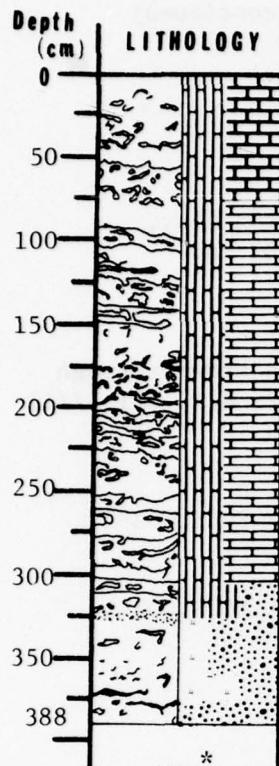
LITHOLOGIC DESCRIPTION

South of Shatsky Rise

KK76-08-06 Sta. 10

Core ID PCOD 04
 Lat., Long. 33° 55.489' N
 173° 59.804' E
 Water Depth 3998 m

Logged By Lineberger



0-54 cm	very pale brown (10YR7.5/3) CALCAREOUS BIOCLAST RICH FORAM NANNO OOZE 31-46% nanno, 20-35% foram, 15% calcareous bioclastic, 10% clay, 7% aniso min
54-263 cm	pale brown (10YR6/3) to very pale brown (10YR7/3) CALCAREOUS BIOCLAST RICH NANNO OOZE 46-74% nanno, 10-20% calcareous bioclastics, 4-15% clay, 2-15% foram, 3-8% aniso min, 0-7% discoaster, tr-1% iso min
263-314 cm	brown (10YR5/3) to very pale brown (10YR7/3) CALCAREOUS BIOCLAST RICH DISCOASTER NANNO OOZE 35-45% nanno, 30% discoaster, 15-20% calcareous bioclastics, 4-7% clay, 3-4% aniso min, 1-2% foram, tr-1% iso min
314-324 cm	dark brown (10YR4/2.5) MINERAL-CLAY RICH CALCAREOUS OOZE 23-25% clay, 20-25% calcareous bioclastics, 15-25% nanno, 12-15% aniso min, 10-15% discoaster, 2-5% iso min, 1-2% foram
324-372 cm	very dark grayish brown (10YR3/2.5) ZEOLITE BEARING MINERAL CLAY 44-45% clay, 40% aniso min, 5-9% zeolite, 5-7% iso min, 1-2% opaque min
372-381 cm	dark grayish brown (10YR4/2.5) CLAY-MINERAL RICH ZEOLITE SAND 40% zeolite, 25% aniso min, 25% clay, 5% iso min, 5% opaque min
381-388 cm	brown (10YR5/2.5) MINERAL CLAY 40% clay, 33% aniso min, 10% zeolite, 9% opaque min

Mottling

Very slight to heavy mottling throughout core; colors range from very dark gray through white (10YR6/5, 7/4, 6/4, 5/4, 8/3, 7/3, 6/3, 5/3, 8/2, 7/2, 6/2, 6/1, 4/1, 3/1)

KEY

- NANNO
- FORAM NANNO
- CALCAREOUS
- ZEOLITE
- MINERAL CLAY

* Pliocene (N21)

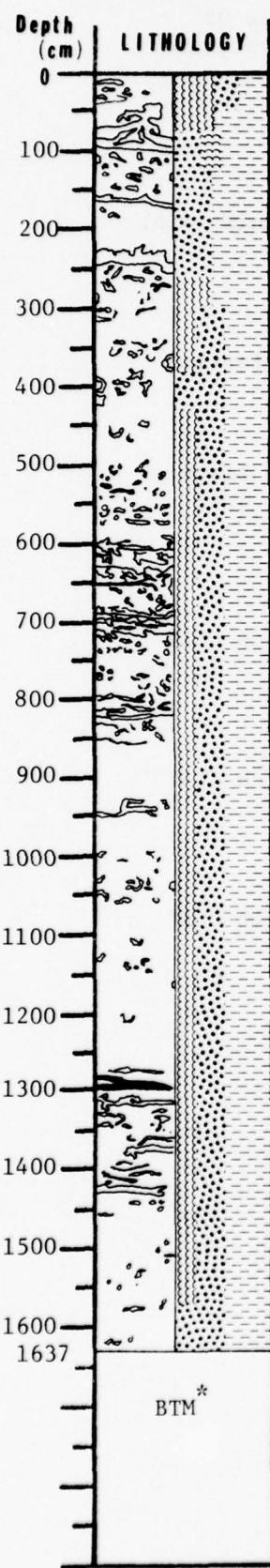
A-49
LITHOLOGIC DESCRIPTION

Hess Rise

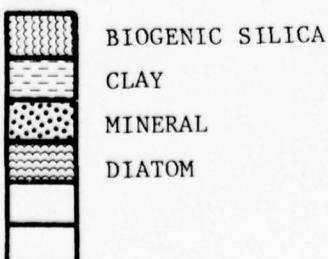
KK76-08-06 Sta. 11

Core ID PCOD 5
Lat., Long. 33° 24.858' N
172° 25.988' E
Water Depth 5019 m

Logged By Lineberger



KEY



* Quaternary (?)

KK76-08-06 Sta. 11
PCOD 05
(continued)

1375-1575 cm brown (10YR4/3)
MINERAL RICH CLAY BIOGENIC SILICA OOZE
29-46% clay, 15-25% siliceous bioclastic, 13-20% aniso min,
8-12% rad, 8-12% diatom

1575-1637 cm brown (10YR4/3)
MINERAL RICH CLAY
70% clay, 25% aniso min, 1% rad, 1% siliceous bioclastic

Mottling

Very slight to heavy mottling throughout core; very pale brown to black
(10YR7/4, 6/4, 5/4, 5/5, 6/6, 3/2, 2.5/1) to (7.5YR6/6, 5/6, 5/8, 4/4).

600-609 cm yellowish brown (10YR5.5/4)
611-637 cm dark brown (10YR3.5/3)
711-717 cm DIATOM-RAD BEARING SILICEOUS BIOCLASTIC-MINERAL RICH CLAY

726-737 cm yellowish brown (10YR5/4)
825-829 cm strong brown (7.5YR5/8)
1518-1519 cm light yellowish brown (10YR6/4)
DIATOM BEARING RAD-SILICEOUS BIOCLASTIC-MINERAL RICH CLAY

609-611 cm reddish brown (7.4YR6/6)
611-637 cm light yellowish brown (10YR6/4)
739-829 cm dark brown (7.5YR4/4)
DIATOM-RAD-SILICEOUS BIOCLASTIC BEARING MINERAL RICH CLAY

296 cm black pebble found, .5 cm diameter
559-562 cm large Mn nodule found (4 x 3 x 3 cm)
1365 cm Mn nodule 4 mm diameter found
1519-1520 cm rock fragment found, .8 cm long

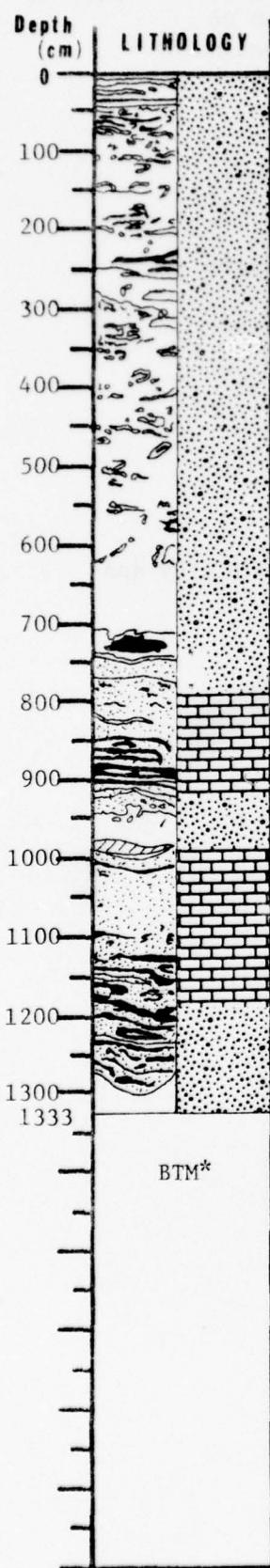
A-51
LITHOLOGIC DESCRIPTION

Emperor Seamounts

KK76-08-06 Sta. 12

Core ID PCOD 06
Lat., Long. 32° 28.304' N
171° 40.699' E
Water Depth 5302 m

Logged By Lineberger, Au & Mato



0-725 cm dark brown (10YR4/3) to yellowish brown (10YR5/4)
MINERAL CLAY
56-73% clay, 25-35% aniso min, tr-3% opaque min, tr-3% siliceous bioclastics, 0-6% rad, 0-2% diatom, 0-1% iso min

725-770 cm dark brown (10YR4/3) to yellowish brown (10YR5/4)
ZEOLITE RICH MINERAL CLAY
46-73% clay, 20-40% aniso min, 5-20% zeolite, 1-4% opaque min, tr-1% iso min

770-935 cm dark brown (10YR3/3) to white (10YR8/1)
CALCAREOUS OOZE
91-98% calcareous bioclastics, tr-5% aniso min, tr-2% clay, 0-2% foram, tr-1% opaque min

935-986 cm yellowish brown (10YR5/4)
MINERAL CLAY
50% clay, 30% aniso min, 15% opaque min, 5% iso min

986-1185 cm pale brown (10YR5.5/3) to very pale brown (10YR7/3)
CALCAREOUS OOZE
86-93% calcareous bioclastics, 5-7% clay, tr-3% aniso min, tr-2% zeolite

1185-1235 cm brown (10YR4.5/3)
MINERAL CLAY
50-62% clay, 30-40% aniso min, 5-8% opaque min, 1% iso min, tr-2% zeolite

1235-1289 cm brown (10YR4.5/3)
CALCAREOUS OOZE
88% calcareous bioclastics, 2-6% foram, 2-4% clay, 0-5% zeolite, tr-1% aniso min

1289-1333 cm dark brown (10YR3.5/3)
MINERAL CLAY
48-52% clay, 30% aniso min, 10-15% opaque min, 2-5% zeolite, 2% iso min

Mottling

Very slight to heavy mottling throughout core; colors range from black to very pale brown (10YR6/8, 5/8, 6/6, 5/5, 7/4, 6/4, 5/4, 4/4, 6/3, 5/3, 4/3, 3/3, 3/2, 2.5/1).

172-180 cm pale brown (10YR6/3)
282-289 cm very dark grayish brown (10YR3/2)
330-334 cm
417-422 cm brown (10YR5/3)
1005-1006 cm brown (10YR4/3)
DIATOM-RAD BEARING MINERAL CLAY

KEY



MINERAL CLAY
CALCAREOUS
ZEOLITE

* Middle Miocene (?)

KK76-08-06 Sta. 12
PCOD 06
(continued)

Layering

984-986 cm yellowish brown (10YR5/5) fine-grained 2-cm-thick layer
CLAY-ZEOLITE BEARING CALCAREOUS OOZE

1002-1003 cm brown (10YR4/3) fine-grained 1-cm-thick layer
MINERAL BEARING CLAY RICH CALCAREOUS OOZE

348-350 cm very soft pocket of sediments

671-672 cm black pebble (Mn nodule?) found 1.5 x 1.5 cm

716-724 cm soupy sediments; large rock found, 7 x 1.5 cm
724 cm sediment texture changes from clay size to mixture of clay and
black sand grains

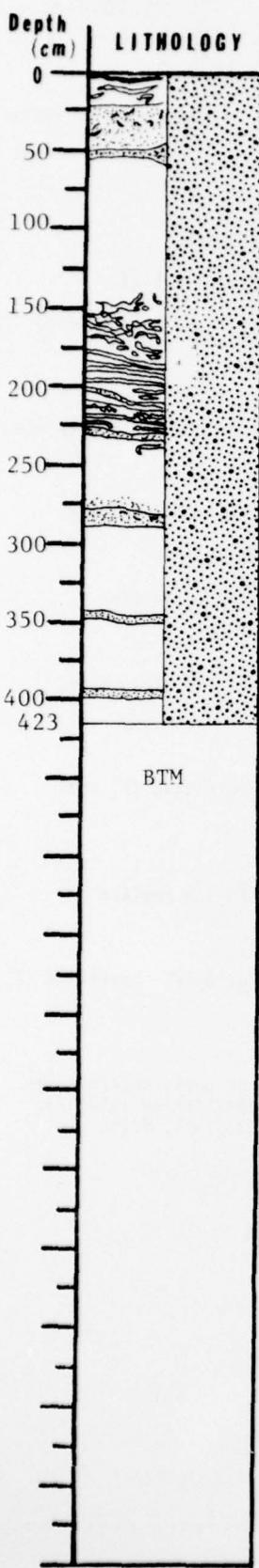
775-777 cm rock found; 2 x 1 cm

931-940 cm white (10YR8/1)
rounded pebble size fragments found (beach sand?)

1059-1209 cm very dark grayish brown (10YR3.5/2.5) mud lumps
ZEOLITE-MINERAL RICH CLAY

A-53
LITHOLOGIC DESCRIPTION

Hess Rise



LITHOLOGIC DESCRIPTION

KK76-08-06 Sta. 13

Core ID

PCOD 07

Lat., Long.

32° 12.733' N

174° 17.175' E

Water Depth

5404 m

Logged By Lineberger & Mato

0-170 cm black (7.5YR2.5/0) to dark yellowish brown (10YR4/4)
MINERAL CLAY
30-55% clay, 25-50% aniso min, 7-15% opaque min, 0-7% zeolite, tr-7% iso min

170-198 cm dark yellowish brown (10YR3/4) to dark brown (7.5YR3/2)
ZEOLITE RICH CLAY MINERAL SAND
35-40% aniso min, 31-36% clay, 15-30% zeolite, 8-12% opaque min, tr-2% iso min

198-423 cm very dark gray brown (10YR3/2.5) to dark brown (10YR3/3)
CLAY MINERAL SAND
25-49% clay, 25-46% aniso min, 12-40% opaque min, 1-7% zeolite, 1-2% iso min

Mottling

Slight to moderate mottling concentrated in uppermost and middle portions of core; colors range from black to dark yellowish brown (10YR5/4, 4/4, 2.5/1) to (7.5YR3/2).

150-170 cm dark brown (7.5YR3/2) to dark yellowish brown (10YR4/4)
200-221 cm ZEOLITE BEARING CLAY MINERAL SAND

Layering

55-56 cm dark yellowish brown (10YR4/4); graded
ZEOLITE RICH MINERAL CLAY

188-190 cm yellowish brown (10YR5/3)
CLAY RICH ZEOLITE MINERAL SAND
190-192 cm olive (5Y5/4) to olive gray (5Y4/2)
ZEOLITE BEARING MINERAL SAND
192-194 cm yellowish brown (10YR5/4)
ZEOLITE RICH CLAY MINERAL SAND

222-228 cm very dark grayish brown (10YR3/2)
ZEOLITE RICH CLAY MINERAL SAND

283-290 cm dark brown (10YR3/3)
ZEOLITE RICH CLAY MINERAL SAND

20-48 cm slightly laminated
170-180 cm many laminations, black
220-222 cm many very fine-grained laminations, black

0-8 cm Mn nodule found; black (7.5YR2.5/0)
dimensions 5.5 x 5.5 x 7.5 cm

0 cm black (7.5YR2.5/0) top of Mn nodule site
MINERAL BEARING CLAY

8 cm black (7.5YR2.5/0) bottom of Mn nodule site
ZEOLITE BEARING MINERAL CLAY

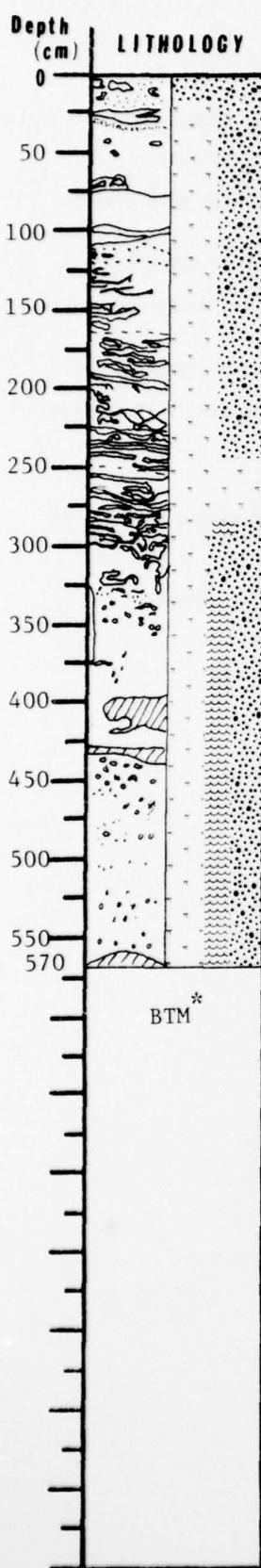
A-54
LITHOLOGIC DESCRIPTION

Hess Rise

A-54

KK76-08-06 Sta. 14
Core ID PCOD 08
Lat., Long. 33° 20.904' N
179° 32.250' W
Water Depth 4826 m

Logged By Lineberger & Mato

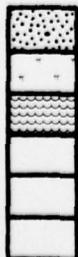


Mottling

Heavy to slight mottling concentrated in central portion of core; colors range from very dusky red to yellowish brown (2.5YR2.5/2) to (5YR2.5/2) to (10YR4/3, 6/4, 5/4) through white to olive yellow (5Y8/2, 5/6) to (2.5Y6/5, 6/6).

101-103 cm yellowish brown (10YR5.5/4)
136-149 cm very dusky red (2.5YR2.5/2)
158-194 cm light yellowish brown (10YR6/4)
MINERAL BEARING GLAUCONITE-ZEOLITE RICH CLAY

KEY



MINERAL CLAY

ZEOLITE

RAD

* Late Cretaceous

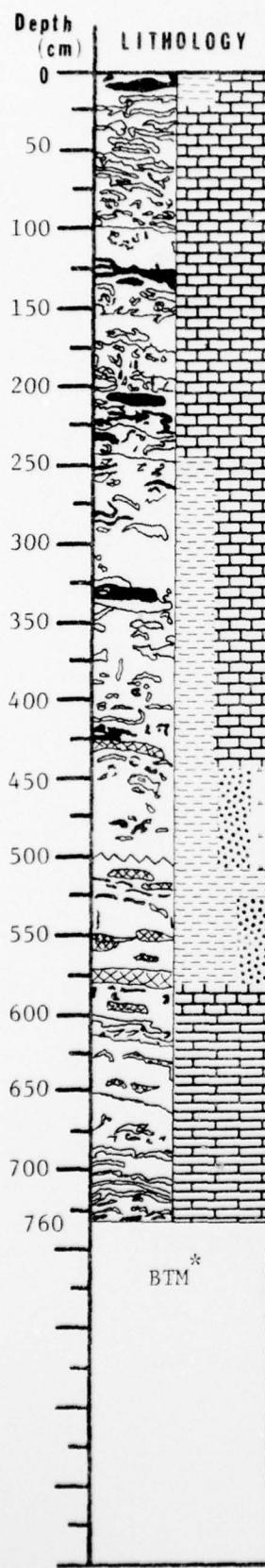
LITHOLOGIC DESCRIPTION

Hess Rise

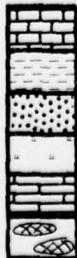
KK76-08-06 Sta. 15

Core ID PCOD 09
 Lat., Long. $34^{\circ} 22.857' N$
 $178^{\circ} 58.113' W$
 Water Depth 4006 m

Logged By Lineberger & Mato



KEY



CALCAREOUS
 CLAY
 MINERAL
 ZEOLITE
 NANNO
 CHERT

*Middle Oligocene-Eocene (?)

KK76-08-06 Sta. 15
 PCOD 09
 (continued)

Mottling

Slight to heavy mottling densely concentrated throughout core; colors range from white to very dark gray (10YR8/1, 7/1, 3/1, 8/2, 7/2, 6/2, 4/2, 3/2, 8/3, 7/3, 6/3, 5/3, 4/3, 3/3, 7/4, 6/4, 5/4, 4/4, 6/5) to dark brown (7.5YR3/2) to white (N8, N9).

19-20 cm	white (10YR8/2) MINERAL-CLAY FORAM BEARING CALCAREOUS BIOCLASTIC RICH NANNO OOZE
144-154 cm	very pale brown (10YR6.5/3) to pale brown (10YR5.5/3)
208-224 cm	MINERAL-CLAY BEARING FORAM-CALCAREOUS BIOCLASTIC RICH NANNO OOZE
270-290 cm	light gray (10YR6.5/1) MINERAL BEARING CLAY RICH CALCAREOUS OOZE
603-609 cm	white (10YR8/1) to brownish yellow (10YR6/5)
623-630 cm	FORAM BEARING CALCAREOUS BIOCLASTIC RICH NANNO OOZE

Layering

744-754 cm	light yellowish brown (10YR6/3.5) thinly laminate layers CALCAREOUS BIOCLASTIC RICH NANNO OOZE
0-10 cm	3 Mn nodules found; diameters of 1 cm, 3 cm, 2 cm
129-1313 cm	Mn nodule found; 2 x 3 cm
203-207 cm	2 Mn nodules found; 4 x 3 cm and .5 x .5 cm
289 cm	rock; approximately 1 cm wide
421-424 cm	large Mn nodule round; surrounding sediment composed of ZEOLITE-MINERAL BEARING DISCOASTER-NANNO-CLAY
472-473 cm	Mn nodules found
482-483 cm	
485-488	
510-514 cm	consolidated mud lump composed of NANNO-MINERAL BEARING CLAY
515-518 cm	consolidated mud lump found; approximately 4 x 4 cm
536-544 cm	consolidated mud lump found; approximately 8 cm x 3 cm x 1 cm
519-523 cm	black platy rocklike substance of MINERAL CLAY surrounding sediment composed of ZEOLITE BEARING MINERAL RICH CLAY
547-550 cm	Mn nodule encrusting consolidated mud and white substance consolidated mud composed of MINERAL BEARING CLAY white substance composed of CLAY surrounding sediment composed of ZEOLITE BEARING MINERAL RICH CLAY

KK76-08-06 Sta. 15
PCOD 09
(continued)

550-554 cm chert fragments found
564-573 cm chert fragments found; interior is very dark gray (10YR3/1)
porcelaneous exterior is white to very pale brown (10YR8/1 to 7/2)
surrounding sediment and rock are composed of ZEOLITE BEARING
MINERAL CLAY

590-593 cm chert fragments found
612-617 cm chert fragments found
620 cm chert fragments found
642-646 cm chert fragments found; dark reddish brown (5YR2.5/2)
757 cm chert fragments found
surroundning sediment composed of CALCAREOUS BIOCLASTIC RICH
NANNO OOZE

504 cm small section of sediment fell out of liner, put in bag and is not
described.

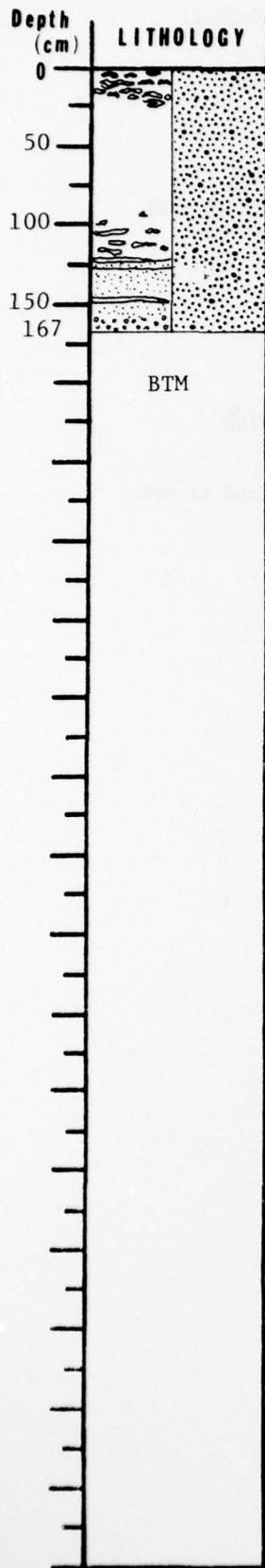
A-58
LITHOLOGIC DESCRIPTION

South of Hess Rise

KK76-08-06 Sta. 16

Core ID PCOD 10
Lat., Long. 30° 03.067' N
Water Depth 178° 45.433' E
4618 m

Logged By Lineberger



0-128 cm very dark gray brown (10YR3.5/2) to dark brown (7.5YR3/2)
CLAY MINERAL SAND
32-57% clay, 25-40% aniso min, 8-10% iso min,
1-10% zeolite, 1-3% opaque min

128-133 cm dark grayish brown (2.5Y4.5/2) to light olive brown (2.5Y5/3)
ZEOLITE RICH CLAY MINERAL SAND
32-42% clay, 20-25% aniso min, 15-30% zeolite,
15-30% iso min, 2-3% opaque min

133-167 cm olive (5Y4/3, 5/4)
CLAY MINERAL SAND
20-47% iso min, 15-44% aniso min, 25-30% clay,
5-7% zeolite, 3-5% opaque min

Mottling

Slight to moderate mottling scattered sparsely in middle portion of core; colors are yellowish brown (10YR5/4) to dark yellowish brown (10YR4/4).

Layering

133-140 cm olive (5Y3/4); lithified
ZEOLITE BEARING MINERAL RICH CLAY

0-2 cm small Mn nodules

0-20 cm small black flecks, probably Mn nodules

128-167 cm color and texture changes; graded from fine sand and clay to coarse pebbles, sand and clay.

KEY



CLAY MINERAL
ZEOLITE

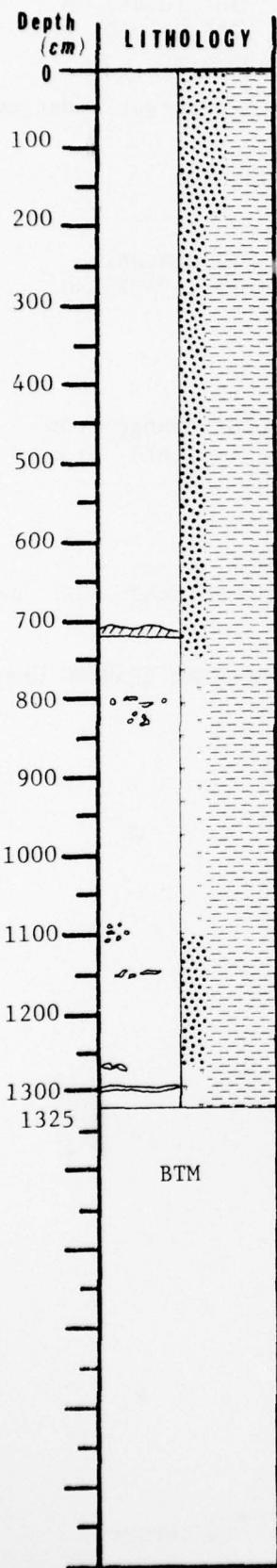
LITHOLOGIC DESCRIPTION

Hawaiian Ridge

KK76-08-06 Sta. 19

Core ID PCOD 11
 Lat., Long. 26° 52.465' N
 178° 26.367' W
 Water Depth 5190 m

Logged By Lineberger & Matsuda



0-165 cm brown (10YR4/3)
 MINERAL CLAY
 49-65% clay, 25-40% aniso min, 8% iso min, 2-3% opaque min,
 0-1% zeolite

165-748 cm dark brown (10YR3.5/3) to very dark grayish brown (10YR3/2)
 MINERAL RICH CLAY
 63-83% clay, 10-25% aniso min, 3-7% iso min, tr-10% zeolite,
 tr-3% opaque min

748-1100 cm very dark grayish brown (10YR3/2) to dark brown (10YR3/3)
 ZEOLITE RICH CLAY
 43-70% clay, 15-35% zeolite, 10-15% aniso min, 3-6% iso min,
 2-6% opaque min

1100-1270 cm brown (10YR4/3)
 MINERAL RICH CLAY
 66-74% clay, 10-15% aniso min, 8-10% zeolite, 3-8% opaque min,
 4-5% iso min

1270-1325 cm dark brown (10YR3/3)
 ZEOLITE RICH CLAY
 55-71% clay, 12-30% zeolite, 8-10% aniso min, 5% opaque min,
 2-5% iso min

Mottling

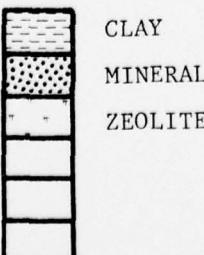
Slight mottling scattered sparsely in lower portion of core; brown (10YR4/3).

1097-1102 cm brown (10YR4/3)
 ZEOLITE BEARING MINERAL RICH CLAY

820-823 cm brown (10YR4/3)
 1279-1281 cm MINERAL BEARING ZEOLITE RICH CLAY
 1299-1301 cm

Layering

1270-1271 cm brown (10YR4/3)
 ZEOLITE-CLAY BEARING MINERAL SAND

KEY

A-60
LITHOLOGIC DESCRIPTION

Emperor Seamounts

KK76-8-6 Sta. 29

Core ID

FFC 1

Lat., Long.

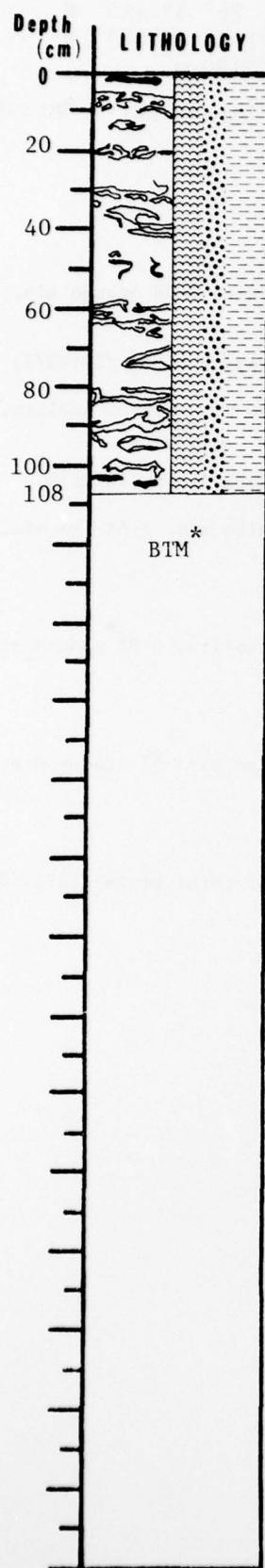
36° 10.467' N

170° 01.960' E

Water Depth

5074 m

Logged By Lineberger & Matsuda



0-108 cm dark brown (10YR3/3) to light yellowish brown (10YR6/4)
 DIATOM-MINERAL RICH CLAY
 53-70% clay, 10-20% aniso min, 5-20% diatom,
 3-7% siliceous bioclastics, tr-7% rad, 2-3% iso min, tr-1% opaque min

Mottling

Slight to moderate mottling throughout core; colors range from very dark grayish brown to pale brown (10YR5/4, 4/4, 6/3, 5/3, 3/3).

6-20 cm pale brown (10YR6/3)
 49-54 cm very dark grayish brown (10YR3/2)
 SILICEOUS BIOCLASTIC BEARING DIATOM-MINERAL RICH CLAY

84-93 cm brown (10YR5/3)
 RAD-DIATOM-SILICEOUS BIOCLASTIC-MINERAL BEARING CLAY

0-2 cm Mn nodules found

106-108 cm Mn nodule found

KEY

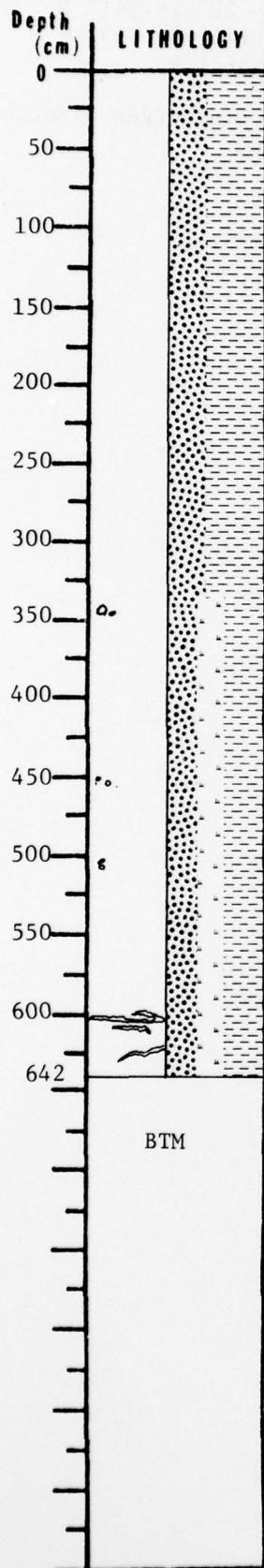


CLAY
 MINERAL
 DIATOM
 MN NODULE

*Quaternary

LITHOLOGIC DESCRIPTION

Clarion Fracture Zone

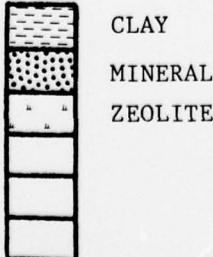
Mottling

Slight to heavy mottling scattered sparsely in lower half of core;
colors of brown (10YR5/3) to light yellowish brown (10YR6/4).

371-372 cm brown (10YR5/3)
NANNO-ZEOLITE-MINERAL BEARING CLAY

461-463 cm light yellowish brown (10YR6/4)
515-516 cm NANNO BEARING MINERAL-ZEOLITE RICH CLAY
613-615 cm

KEY



KK76-10-10 Sta. 01

PCOD 01

20° 19.507' N

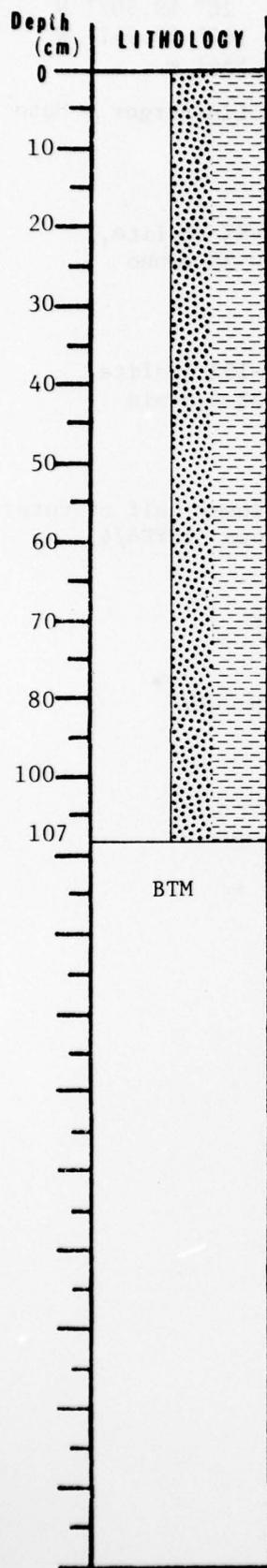
144° 37.941' W

Water Depth 5541 m

Logged By Lineberger & Mato

LITHOLOGIC DESCRIPTION

Clarion Fracture Zone



Core ID KK76-10-10 Sta. 01

FFC 01

20° 19.341' N

144° 36.859' W

Water Depth 5571 m

Logged By Lineberger & Matsuda

0-107 brown (10YR4/3)
 MINERAL RICH CLAY
 68-82% clay, 10-20% aniso min, 5-6% zeolite,
 1-3% nanno

LITHOLOGIC DESCRIPTION

Clarion Fracture Zone

KK76-10-10 Sta. 02

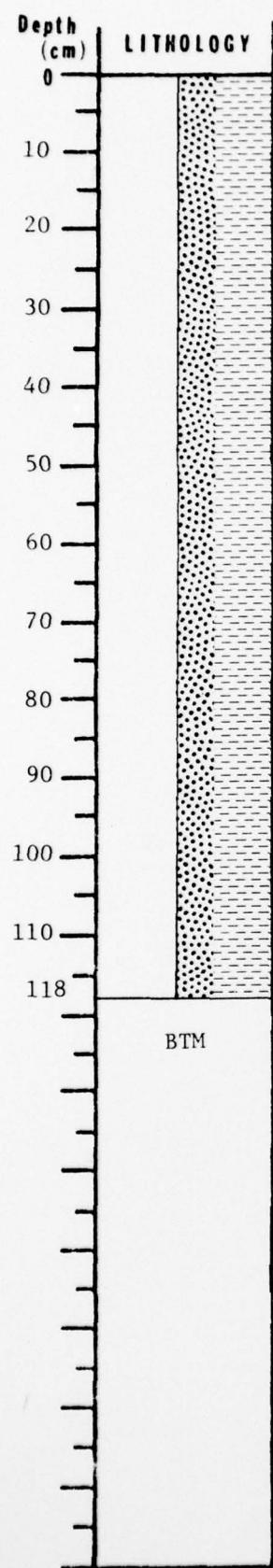
Core ID FFC 04

20° 30.816' N

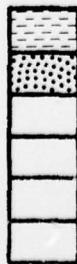
Lat., Long. 144° 28.183' W

Water Depth 5576 m

Logged By Lineberger & Matsuda



KEY



CLAY

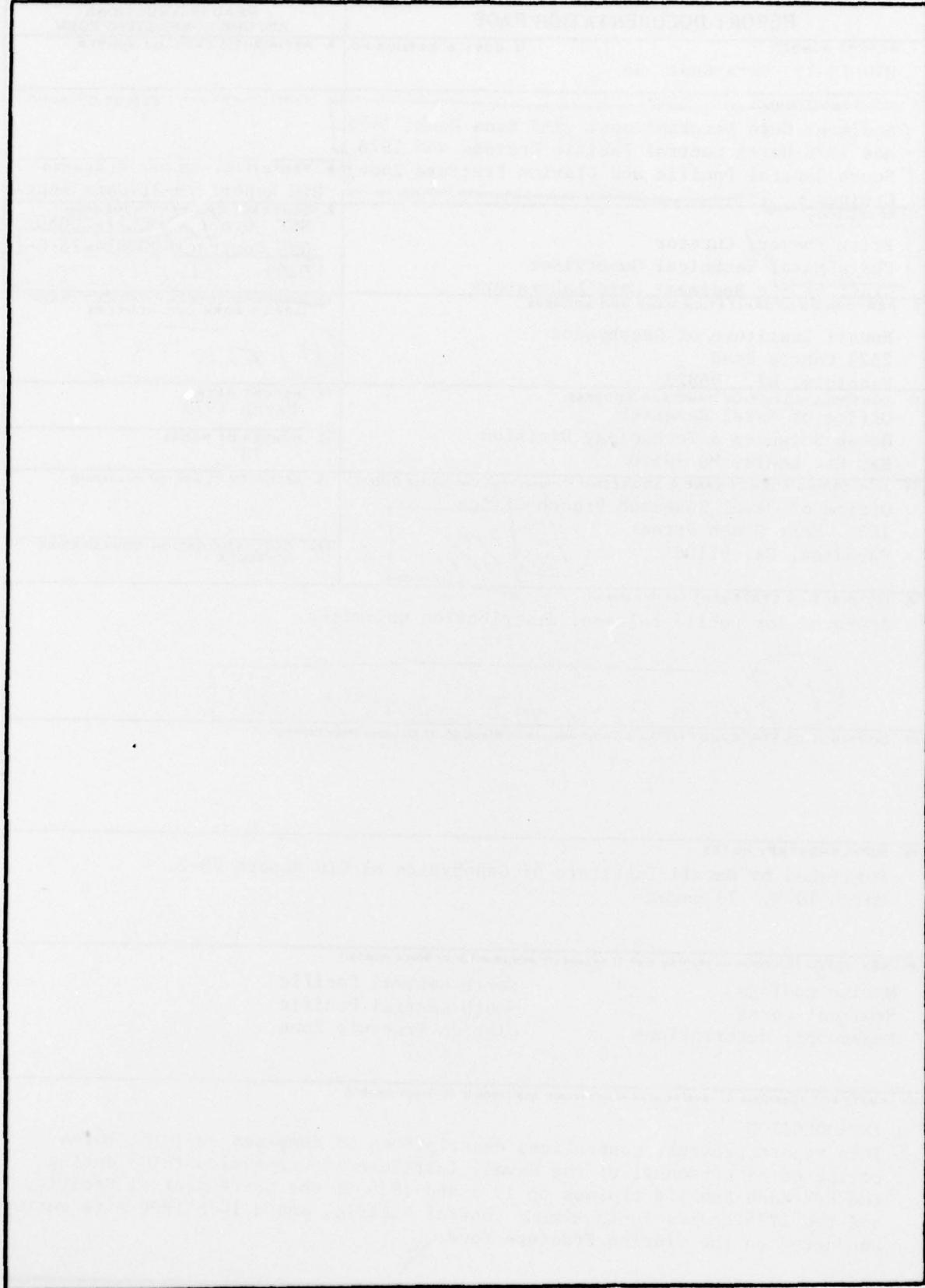
MINERAL

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER HIG-79-2; Data Rept. 36	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Sediment Core Descriptions: R/V Kana Keoki 1975 and 1976 North Central Pacific Cruises and 1976 South Central Pacific and Clarion Fracture Zone Cruises		5. TYPE OF REPORT & PERIOD COVERED
6. AUTHOR(s) Fritz Theyer, Curator Chris Matos, Technical Supervisor Staff of the Sediment Core Laboratory		7. PERFORMING ORG. REPORT NUMBER HIG Report 79-2, Data Rept 36
8. PERFORMING ORGANIZATION NAME AND ADDRESS Hawaii Institute of Geophysics 2525 Correa Road Honolulu, HI, 96822		9. CONTRACT OR GRANT NUMBER(s) NSF Gra (15) OCE77-20050 ONR Con (15) N00014-75-C-0209, ✓ NSF-OCE77-20050
10. CONTROLLING OFFICE NAME AND ADDRESS Office of Naval Research Ocean Sciences & Technology Division Bay St. Louis, MS 39520		11. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 11/ Feb 79 1
12. REPORT DATE March 1979		13. NUMBER OF PAGES 73
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Office of Naval Research Branch Office 1030 East Green Street Pasadena, CA. 91106		15. SECURITY CLASS. (of this report)
		16a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
(14) HIG-79-2-HIG-DATA-36		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES Published by Hawaii Institute of Geophysics as HIG Report 79-2. March 1979, 73 pages		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Marine geology North Central Pacific Sediment cores South Central Pacific Megascopic descriptions Clarion Fracture Zone		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) INTRODUCTION This report presents generalized descriptions of deep-sea sediment cores collected by personnel of the Hawaii Institute of Geophysics (HIG) during the R/V Kana Keoki's cruises of 1975 and 1976 in the North Central Pacific, and the 1976 cruise in the South Central Pacific, and a 1976 IPOD-site survey conducted on the Clarion Fracture Zone.		

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